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An analysis of entrepreneurial intentions of future Chartered Accountants in South Africa

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An analysis of entrepreneurial intentions of future Chartered Accountants in South Africa

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School of Accounting

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Abstract

The purpose of this study was to evaluate the entrepreneurial intent of future Chartered Accountants (CAs) in South Africa. It was inspired by the renewed interest for entrepreneurship to become a possible tool to rectify the poor macroeconomic conditions in the country. A questionnaire was sent to fourth year HDipAcc students and to trainees on the CA training programmes in various accounting firms. Exploratory factor analysis was used to identify the factors that influence entrepreneurial intentions. Six key factors were found to influence the entrepreneurial intent of future CA's, namely, family support, perceived desirability and feasibility, locus of control, career mentors, role model and community support. Two tailed t -Tests were also conducted to determine whether there were significant differences for each factor in terms of the gender, level of study (4th year / Trainees in Practice) and place of practice (TIPP/TOPP) of the respondents. The t -Tests revealed significant differences for perceived desirability and feasibility, locus of control and the role model and community support factors. Furthermore, it was also found that family support is a key factor in determining the desirability and feasibility of starting a new venture. The study highlights the factors that drive entrepreneurial intention in order to encourage entrepreneurship as a career path among Chartered Accountants. Finally, the study concludes by making suggestions on how to foster entrepreneurial intent.

Keywords: Future Chartered Accountant, Entrepreneurship, Entrepreneurial intent

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Chapter 1: Introduction

1.1 Background

1.1 Contextualisation

Entrepreneurship is widely recognized as a mechanism to spur on economic growth and reduce unemployment in developing countries (Wennekers & Thurik, 1999). Theoretical and empirical evidence exists from many studies showing that elevated levels of entrepreneurial activity in a country result in lower unemployment rates and higher economic growth (Reynolds, 1999; Wennekers & Thurik, 1999; Wong, Ho, & Autio, 2005). For example, Wong et al. (2005) studied 37 countries using cross sectional data to evaluate whether the level of entrepreneurial activity in a country influenced economic growth and unemployment levels. The study found that countries with high entrepreneurial activity levels, had higher growth rates and lower unemployment rates compared to countries that had lower entrepreneurial activity levels.

A key challenge for young people worldwide is obtaining employment (Jeffrey, 2010). This challenge is continually outlined in many studies and research works conducted internationally. The *World Employment Social Outlook Trends report* (the ILO report) is compiled annually by the International Labour Office and outlines the challenge related specifically to an individual's ability to get employment (International Labour Office, 2018).

With reference to the ILO report, the global unemployment rate stood at 5% and the global youth unemployment rate was 13% in 2018 (International Labour Office, 2018). Youth is defined in the study as being 25 years and younger. These figures illustrate that more youth (globally) are unemployed compared to their adult counter parts. Moreover, the ILO report finds that although the global unemployment rate is stabilising, the youth unemployment rate is rising steadily each year (International Labour Office, 2018).

In a South African context, real GDP growth was expected to reach 0.3% in 2019 and 0.9% in 2020 (National Treasury, 2020). This, however, is significantly lower than the average growth rate of developing nations in sub – Saharan Africa, which was projected to be 3.6% in 2019 (The World Bank In Africa, 2019). In addition, the unemployment rate in South Africa was 27.1% in 2018 and 29,1% in 2019 (National Treasury, 2019, 2020). From the perspective of the youth (individuals aged 15 – 24), the unemployment rate was significantly higher. It was a staggering 52.4% in 2018 and 56% in 2019, almost double the total unemployment rate mentioned previously (National Treasury, 2019). Moreover, the youth unemployment rate of

South Africa in 2018 was the highest in the World (Daniel, 2018). These statistics highlight the poor macro-economic performance of South Africa.

Unemployment, particularly in developing nations, tends to have dire consequences for young people (Bignotti, 2013). Becker and Hills (1980) found that a positive correlation existed between a youth's experience of unemployment early in their working life and the likelihood of experiencing unemployment again. It is evident that increasing youth unemployment in a country may result in elevated levels of unemployment in the future for the country as these individuals are less likely to find employment after being initially unemployed. The high unemployment rates in South Africa, especially those relating to young people, are of major concern given the adverse effects unemployment has on the economy.

Unemployment can also affect how people integrate into society. This is especially true for the youth (Malmberg-Heimonen & Julkunen, 2006). Empirical evidence exists showing that youth who are unemployed are more likely to engage in criminal activity than those who are not (Fougère, Kramarz, & Pouget, 2009). Phillips and Land (2012) state that an individual has a choice to earn his/her wages either from conventional means or from illegal activity. The choice is influenced by how attractive each element is. When an individual is unemployed the choice to earn wages illegally becomes more attractive than the perceived societal costs of committing the crime. The individual in turn ends up committing the crime to earn the wage. This criminal activity can have a devastating impact on society, by making societies unsafe and also reducing economic activity in the region (Van Dijk, 2007).

In addition, unemployment can have a negative impact on the psychological and physical wellbeing of those unemployed (Lundberg & Wuermli, 2012; McKee-Ryan, Song, Wanberg, & Kinicki, 2005). Unemployment causes financial strain which results in individuals having to make financial adjustments (Liem & Liem, 1988). By having to make financial adjustments due to unemployment, the quality of life lived by the person deteriorates resulting in health-related effects becoming prevalent in one's life.

The physical effect of unemployment is typically measured by mortality rates (Halliday, 2014). Gerdtham and Johannesson (2003) study the impact of unemployment on mortality rates of a sample of 30 000 individuals in Sweden, aged 24 – 60. After controlling for initial health status and exogenous health characteristics, Gerdtham and Johannesson (2003) find that the probability of dying of diseases (except cancer and cardiovascular disease) rises by over 50% when an individual is unemployed. Empirical research studies further support these results by showing a positive correlation between unemployment and mortality rates (Clark & Oswald, 1994; Dooley, Fielding, & Levi, 1996; Jin, Shah, & Svoboda, 1995).

The psychological impact of unemployment can be evaluated though a person's sense of self-worth (Liem & Liem, 1988). Psychological well-being is highly subjective (Diener, Suh, Lucas, & Smith, 1999). According to Wilson (1967), people are happy when they are healthy, young, well paid, extroverted, well educated, worry free, religious, married, have high self-esteem and are optimistic. The unemployed are therefore unlikely to be happy because they will be unpaid and are likely not optimistic about the future. Moreover, unemployment can lead to high instances of mental health issues in those individuals who are affected (Jin et al., 1995).

Despite the evidence that entrepreneurship can reduce unemployment and increase growth, South Africa has continually displayed lower entrepreneurial activity in comparison to other developing nations (The World Bank, 2018). Various causes are outlined from lack of skills, slow private investment to spur on entrepreneurial activity, political uncertainty in the country, and lack of intent to start new ventures, to name a few. Krueger and Brazeal (1994) argue that before there can be entrepreneurship there needs to be potential for entrepreneurship through intent. Policy makers in South Africa should therefore consider the potential for entrepreneurship to address the issues at hand to encourage entrepreneurial activity (Swartz, Amatucci, & Marks, 2019).

1.1.2 The Chartered Accountancy Profession and Entrepreneurship

A key attribute of successful entrepreneurs globally is the level of financial literacy they poss (Drexler, Fischer, & Schoar, 2014; Eniola & Entebang, 2016; Wise, 2013). Financial literacy refers to the competencies that one possesses in relation to personal finance skills and business management skills. Financial literacy assists people to make accurate financial decisions and to manage and understand risk (Glaser & Walther, 2014). Financial literacy also helps entrepreneurs manage money more effectively (Glaser & Walther, 2014). Empirical and theoretical studies show that entrepreneurs with high financial literacy levels typically perform better and are able to generate higher sales for their businesses than those who are not financially literate (Bruhn & Zia, 2013; Kidwell & Turrisi, 2004; Lusardi, Mitchell, & Curto, 2010).

Njoroge (2013) conducted a study of a sample of SME's in Kenya to evaluate the relationship between financial literacy and new venture success. The study found that a large portion of successful SME's were founded by entrepreneurs that had high financial literacy and a strong understanding of finance. Wise (2013) conducted a similar study in Canada, using a sample of youth entrepreneurs that had received start- up loans through their participation in the Canadian Youth Business Foundation. The study found that were entrepreneurs had high financial literacy, there was a high probability that the business would have accurate financial

statements and a high chance that the loans given would be repaid. These studies further reinforce the importance of financial literacy to new venture success and longevity.

Chartered Accountants (CA's) are trained extensively in audit, tax, management accounting and finance and financial statement reporting (SAICA, 2019). This combination of subjects gives CA's a formidable set of financial skills and places them in a position to start businesses or advise those who wish to do so (SAICA, 2019(b)). It appears that they could be central to any solution to reduce the high unemployment rates and promote economic growth.

1.1.3 Research Problem

From the contextualisation above it is evident that South Africa has high unemployment and low growth prospects. Furthermore, we see that society is impacted heavily by high unemployment and low growth. In South Africa, policy makers encourage individuals, particularly the youth, to look into new venture creation to avoid the adverse effects of being unemployed (Bignotti, 2013). In addition, professional bodies in accounting, such as the South African Institute of Chartered Accountants (SAICA), play a pivotal role in advising policy makers and the government on policies that will ensure economic growth and spur on entrepreneurial activities in a country . Unfortunately, little is being done to actually understand what factors influence choices to create new ventures or for an individual to become an entrepreneur.

1.2 Research Question

What are the factors that influence the entrepreneurial intent of future Chartered Accountants in South Africa?

1.3 Purpose and Contribution of the study

The purpose of the research is to explore the entrepreneurial intent of future CA's in South Africa. This is done through an exploratory factor analysis approach. The study further seeks to provide a South African perspective of analysing entrepreneurial intentions of individuals, who are likely to have the acumen required to be successful entrepreneurs. This is done by critically evaluating the factors that influence the decision of a future CA to become an entrepreneur.

In addition, by analysing the factors that influence a future CA's attitude towards entrepreneurship, we can better understand how the state and professional bodies in accounting can foster necessary entrepreneurial values aimed at tackling the high

unemployment and low growth rates in the country. The research may also guide accounting bodies and universities in curriculum setting as well professional training aimed at encouraging entrepreneurship as a career path among students.

1.4 Importance of the study

Given the high unemployment rate in South Africa (particularly among the youth) and low growth rates in South Africa, the conversation around entrepreneurship is becoming increasingly important. If consensus is being reached that entrepreneurship is a possible solution, policy makers and educational bodies need to assess what drives individuals to start businesses. This will allow policy makers and educational bodies to create policy, curriculum and training programmes that will increase the likelihood of people choosing entrepreneurship as a career path.

Incentivising entrepreneurial activity in an economy is not as simple as telling people to start businesses (Van Praag, 1996). People are largely driven by intentions to engage in behaviour, which are shaped by their own unique beliefs and attitudes (Ajzen, 1985). In this context, this study empirically investigates what factors influence future CA's to become entrepreneurs. Several studies have been conducted around the career objectives and strategies of chartered accountants and chartered accountant students (Jordaan, Smithard, & Burger, 2009; Van Zyl & de Villiers, 2011; Vidwans & Du Plessis, 2019). Similarly, research on the entrepreneurial intent of students and young adults abounds (Alemu & Ashagre, 2016; Gilmartin et al., 2019; Phong, Thao, & Nguyen, 2020). However, there is an apparent lack of literature that links these two strands of research. These study aims to understand whether young people in the CA profession are likely to choose entrepreneurship as a career path.

1.5 Assumptions, limitations and delimitations of the study

The key assumption of this research paper is that a predefined structure exists to determine the entrepreneurial intent of future CA's. It is assumed that a framework of factors to predict the entrepreneurial intent of future CA's can be formulated. This assumption stems from the fact that the theory of planned behaviour, developed by Ajzen (1985), also uses it as a basis of measuring intentions. This theory has also been successfully used before to measure intentions applying the same assumption stated in this paper (Krueger & Carsrud, 1993; Pelling & White, 2009; Yazdanpanah & Forouzani, 2015).

From a limitation point of view, the study intends to assess the entrepreneurial intent of future CA's only. The study uses CA trainees and 4th year Accounting Science students at The University of the Witwatersrand (future CA's) as a proxy for youth attitudes towards

entrepreneurship. It is acknowledged that the definition of youth is broad and can encompass a wide range of individuals.

From a delimitation perspective, the definition of an entrepreneur is not expressly stated in the questionnaire given to respondents. Participants are asked only to indicate whether they have started a business before to determine whether they are currently entrepreneurs. It is noted however in the study that the definition of an entrepreneur is broad and may include other aspects not covered in the study.

The study also acknowledges that intentions are driven by various factors that may not necessarily be covered by the entrepreneurial models introduced in the paper. The study is therefore not intended to provide an exhaustive list of all possible factors that may influence the decision of future CA's to start a new venture. The study rather identifies key factors from prior research to assess the applicability thereof to CA's currently and also identify possible new factors that have not been previously considered.

1.6 Definitions

The table below highlights some important definitions that are referred to in this paper.

Table 1: Definition of terms

Terms	Meaning
Business	An integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing a return in the form of dividends, lower costs or other economic benefits directly to investors or other owners, members or participants (IASB, 2017)
Entrepreneur	A person who creates a new business for the purpose of generating wealth for themselves (Kao, 1993; Shumpeter, 1934; Stevenson, 1983)
Entrepreneurship	The act of creating a new business for the purpose of making a profit (Simpson, 1989).
Intentions	The final product of a person's attitudes and beliefs (Ajzen, 1985).
Intrapreneur	An individual who is innovative in thinking, but has never created a business before and does not intend to create one in the future (Wennekers & Thurik, 1999).
Future CA	An individual who is currently in their first, second or third year of their training contract at a registered SAICA accredited

	training office or who is currently a student registered for the CTA programme at a registered SAICA accredited university.
Youth	Individuals who have ages between 15 – 25 years (National Treasury, 2019).

Chapter 2: Literature Review

2.1 Defining Entrepreneurship

Defining entrepreneurship is often quite complex (Warnecke, 2013). This is because it is a multifaceted concept (Iversen, Jørgensen, & Malchow-Møller, 2007). No one universal definition can be attributed to the term (Cunningham & Lischeron, 1991). Given the broadness of the term, it is necessary to assess what are the generally accepted characteristics of an entrepreneur and entrepreneurship.

Shumpeter (1934) was one of the earliest scholars to research entrepreneurship, its definition and impact on economies. He defined entrepreneurship as the ability to combine already existing resources in creative ways. He also distinguished between invention (the art of creating new technologies) and innovation (the art of creating new technological methods). He argued that entrepreneurs were innovators in nature and not necessarily inventors. That is, inventors could only be entrepreneurs if they invented a new process or method.

Stevenson (1983) refined Schumpeter's earlier definition. He defined entrepreneurship as the process of making changes, doing everything others are doing to a greater effect and the pursuit of opportunities by using resources beyond one's control. His definition introduces the concept of taking advantage of opportunities and keeps the other two aspects related to innovation introduced by Schumpeter (1934).

Kao (1993) would later refine the definition introduced by Stevenson (1983). He argued that Stevenson's definition did not preclude criminal activities such as robbery and drug trafficking, owing to his definition of entrepreneurship being too broad. To avoid this problem, Kao stated that a further element needed to be added to the definition. An activity must have the ability to create wealth for the individual and add value to society to constitute entrepreneurship. As criminal activities generally harm society, they would thus not qualify as entrepreneurial despite creating wealth for an individual. The Oxford English dictionary further supports this view. It adds that entrepreneurship is about creating businesses in the pursuit of profit. A person thus becomes an entrepreneur when they establish their own business. It is this definition that is currently used today to define entrepreneurship and an entrepreneur.

In a more contemporary context, confusion often exists on the difference between small business owners and entrepreneurs. At an entrepreneurial seminar hosted at the University of the Witwatersrand in September 2019, entrepreneur and CA (SA), Andile Khumalo argued that small business owners were not the same as entrepreneurs (Wits University, 2019). In

Andile's view, entrepreneurs were bigger minded and driven to create large business systems were in contrast small business owners focus on servicing their small customer bases only. Spring (2014) reinforces this view by stating that entrepreneurs tend to have big ideas, love risk, think well into the future and prioritise scaling their businesses. In contrast, small business owners have small aspirations, are risk averse, think on short term basis and seldom attempt to scale their businesses (Spring, 2014).

International Financial Reporting Standard (IFRS) 3, provides a useful guide in establishing the definition of a business. Reference is made that businesses have inputs, processes and outputs (IASB, 2017). Inputs refer to economic resources that create or have the ability to create outputs, when one or more processes are applied to it. Examples of inputs include tangible assets (current and non-current), intangible assets, intellectual property and employees.

A process is any system, standard, protocol, convention or rule that when applied to an input or inputs, creates or has the ability to create outputs (IASB, 2017). Examples include management processes, operational processes and resources management processes. Heterogeneous activities which are distributed and performed by employees are the hallmark of a process in a business. (Smirnov, Reijers, Weske, & Nugteren, 2012). Lastly, outputs are the results of inputs and processes applied to inputs that provide or have an ability to provide a return in the form of a dividend, lower costs or other economic benefits (IASB, 2017).

For the purposes of the research paper, entrepreneurship will relate to the act of creating a new business. It follows that in determining the entrepreneurial intent of future CA's, reference is being made to their intent in creating a new business.

As stated earlier in this section, different views on the entrepreneur exist from prior literature. One other view of entrepreneurship stems from the employee perspective and innovation in business (Wennekers & Thurik, 1999). The concept is that employees can be entrepreneurial in thinking and as a result, the business can become innovative, thus make more profits (Wennekers & Thurik, 1999). Such a person who is innovative in thinking is known as an intrapreneur (Wennekers, 1999). An intrapreneur has neither started a business before nor does he/she intend on starting a business in the future. This study does not evaluate the entrepreneurial intent of future CA's from the intrapreneur perspective. The study focuses rather on the traditional view of the entrepreneur, which is the intent to create a new business.

2.2 Theoretical support for the importance of entrepreneurship to economies

2.2.1 Traditional views of entrepreneurship

In the field of developmental economics, scholars attempt to ascertain how developing countries can improve and increase their respective economic performance (Naudé, 2010). The consensus is that it is important that developing nations increase the strength of their institutions, by doing so this can filter to improved economic performance. These institutions include the rule of law, property rights, good governance practises, accountability and entrepreneurship. Entrepreneurship is thus seen as an institution for development. By cultivating entrepreneurial activity, countries increase the likelihood of macro-economic growth.

To understand the theoretical basis for the link between entrepreneurship and economic performance it is important to firstly understand the origins of entrepreneurship and its founding tenants (Hébert & Link, 1989). The origins of the entrepreneur can be traced to three major traditions. There is the German tradition, the Neo-Classical tradition and lastly and the Austrian tradition of Menger, von Mises and Kirzner (Wennekers & Thurik, 1999).

German tradition:

The German tradition is often called the Schumpeterian tradition. The German tradition sees entrepreneurs as creators of instability or creative destruction (Streissler, 1994). That is, entrepreneurs will radically change the normal convention or how things are done, and in this way they will create new ventures in new markets that will improve the economies of countries.

Neo – Classical tradition

The Neo-Classical tradition states that the entrepreneur is important in cultivating a state of equilibrium in the markets through the entrepreneurial activities they conduct (Cantilion, 1931; Schumpeter, 1928). Neo -classical theory can be further seen as an economic concept that assumes that markets are inherently perfect, with the forces of demand and supply dictating how individuals make production and consumption decisions (Lowrey, 2003). Given this tradition, entrepreneurs are therefore seen as having perfect information to make rational choices in order to meet consumer demands (given available supply) with the aim of restoring equilibrium in the market.

Austrian tradition

The Austrian traditional view of the entrepreneur is slightly different. It states that the entrepreneur’s main function is to combine resources to fulfil discontented needs or improve

market inefficiencies (Knight, 1921; Schultz, 1975). The Austrian tradition acknowledges that entrepreneurs possess unique talents that allow them to identify these discontented needs or market inefficiencies and as a result profit from them.(Witt, 1999).

2.1.2 Link between traditional views and economic growth

By understanding the traditional views mentioned above we can now link entrepreneurship to important economic matrices. There is theoretical evidence and empirical studies that show the links between entrepreneurship and economic growth. Wenneker & Thurik (1999) detail theoretical evidence that supports the link between entrepreneurship and economic growth. They use intermediate variables and linkages in order to establish the relationship between entrepreneurship and economic growth. Examples of intermediate variables are innovation, as well as the entry and exit of firms in markets (competition).

Looking at the competition (entry and exit of new firms) and innovation, it is important to understand the role of the entrepreneur. Herbert and Link (1989) argue that the role of the entrepreneur is twofold. Principally, the entrepreneur is seen as a person who creates a new business and then subsequently organises, operates and manages the business. The second view relates to describing the entrepreneur as an innovator (Shumpeter, 1934). The entrepreneur is seen as someone who can convert ideas and inventions into economically viable entities (Baumol, 1993).

In explaining the competition perspective, focus is placed on the concept of a start-up (Wennekers & Thurik, 1999). A start- up is a business that is recently formed. It is seen as a major new entry into any industry. Various micro and macro-economic factors influence the initiation of start-ups (Agnete Alsos, Ljunggren, & Toril Pettersen, 2003). Van Praag (2003) argues that to form a ‘start- up’, entrepreneurs must be both willing to start a business and perceive an opportunity to exist to make profit from starting the business.

Opportunity is the defined as the possibility of becoming an entrepreneur, should the person want to be one (Van Praag, 2003). Opportunity is dependent on the following factors: the availability of start-up capital to the entrepreneur to create a new business, the individual’s inherent entrepreneurial ability and the economic environment in which the entrepreneur operates. In addition, Van Praag (2003) further defines willingness as a product of the entrepreneur’s individual preferences, as well as the perceived attractiveness of alternative solutions outside entrepreneurship. It follows that if there are alternatives outside of entrepreneurship that are more attractive to an individual or the individual prefers other alternatives, the person will be less willing to create a new business. He argues further that

once entrepreneurs form start-ups (due to alternatives being unattractive) they then act as catalyst for job creation which in turn increases economic growth in a country.

According to Lumpkin and Dess (1996), theoretical evidence for economic growth can also be explained through the process of innovation. In their view , the level of innovation may vary in its radicalness among different entrepreneurs but the willingness to create something new is hallmark of an innovator. Innovation and the creation of new ventures can lead to economic growth. That is, by fulfilling their roles (innovating and creating new businesses), entrepreneurs can increase economic growth in a country.

Reynolds (1999) provides a slightly refined view to that introduced by Lumpkin and Dess (1996). He argues that economic growth is not simply caused by innovation and improvements in technology. Economic growth is also a result of firms improving their own technology, organization and management processes. By initiating these internal improvements to their processes, firms will force other firms out of business through being more innovative and competitive. Reynolds calls this process 'creative destruction'. Creative destruction' creates better jobs and removes poor jobs in an economy. The net effect is that firms are forced to improve their internal processes and to employ more workers to achieve this goal, thus creating jobs and increasing economic growth. Creative destruction also enhances the standard of living of individuals in an economy. This is because firms need to be innovative in solving societal problems in order to beat their competitors. This constant desire to improve further increases economic growth.

Audretsch, Carree, and Thurik (2001) offers a different view to the effect of formation of firms on economic growth in comparison to Hébert and Link (1989). On the one hand high unemployment rates may incentivise individuals to start new ventures. This is because individuals need to have sources of income to live and will naturally resort to creating their own ventures should employment opportunities not be present (Cowling & Bygrave, 2002). This is known as the 'refugee effect', as people (like refugees) flock towards starting their own business due to the high unemployment.

In contrast high rates of self-employment may also increase economic activity thereby reducing unemployment in subsequent periods. This is known as the 'entrepreneurial effect'. (Audretsch et al., 2001) argues that the refugee effect has a positive impact on the economy and the entrepreneurial effect has a negative impact.

The reason why the 'entrepreneurial effect' is negative, from a theoretical perspective, is because of the application of Gibrat's Law (Audretsch et al., 2001). Gibrat's law argues that the growth of the firm is not impacted by its size. This implies that the movement from large enterprise employment to small enterprise employment will not affect the total employment

rates, as the individual growth rates of firms are identical. That is, it is not automatic that the increase in firm size will result in more people being employed. Firms may choose to grow their technology capacity instead without a proportionate increase in employment. Audretsch et al. (2001) support this view empirically in their study of 23 OECD counties. They find that countries with high entrepreneurial activity as measured by the 'refugee effect', show higher employment rates and higher growth rates compared to countries with lower prevalence of the refugee effect. This study therefore supports the refugee effect as a mechanism to increase growth and reduce unemployment. Entrepreneurial intent is measured from the perspective of starting a new business, a concept linked to the refugee effect.

2.3 Empirical evidence of the effect of entrepreneurship on economies

Empirical evidence also exits supporting both the assertions made by Wenneker and Thurik (1999) and Reynolds (1999), in relation to the link between entrepreneurship and economic growth. For example, Reynolds (1999) conducted a study with respect to firm births and deaths in the United States in 382 labour market areas. The study found that were creative destruction took place more jobs were created resulting in increased economic growth as measured by number of jobs created.

One other empirical study is the Global Entrepreneurship Model (GEM), that provides data on entrepreneurship as a process of creating new businesses (Wong et al., 2005). Wong et al. (2005) in their study used cross sectional data stemming from 37 countries who participate in the GEM 2002 study. The foundation of the model stems from historic consensus around job creation that is fostered by the formation of start-ups. It is argued by creating new businesses or start-ups, entrepreneurs provide employment opportunities for individuals in a country, which in turn increase economic activity and economic growth.

The GEM model measures the effect entrepreneurship has on the economy, empirically, using Total Entrepreneurship Rates (TE rates). TE rates measure the proportion of working age adults in a country who are either involved in starting up a new business or active owner managers of businesses less than 42 months old. Wong et al. (2005) hypothesized that counties with higher TE rates would have higher growth rates. The study concluded that a high correlation existed between countries that had higher TE rates and growth rates

Plehn-Dujowich and GROVE (2012) also conducted an empirical study to measure the relationship between unemployment, economic growth and entrepreneurship. The study looks at data from 10 sectors in the US using quarterly data from 2000 to 2009. Entrepreneurship was measured using data from the Bureau of Labour Statistics. The study found that in the

large portion of the sectors, growth in entrepreneurship had a positive impact on economic growth and a negative/inverse impact on unemployment.

The previous sections illustrate that a relationship is present between unemployment, entrepreneurship and economic growth . The literature shows that both from a theoretical and empirical perspective, that elevated levels of entrepreneurship in a country has a positive impact on economic growth and unemployment.

2.5 Entrepreneurial intentions

Entrepreneurial activity does not occur in isolation (Aldrich & Kenworthy, 1999). It is often moulded by the cultural and social environment to which the person affiliates (Hayton, George, & Zahra, 2002). It is from the these experiences that our intentions can be formed (Shapero & Sokol, 1982). Entrepreneurship is thus a direct result of planned and intentional behaviour (Kautonen, van Gelderen, & Fink, 2015).

The previous sections have outlined the importance of entrepreneurship to increasing economic growth and reducing unemployment. It was also highlighted that South African in particular is in a crisis with respect to these two macro-economic variables and that entrepreneurship could be a tool to rectify these issues. The question that remains is: what exactly prompts people to start these businesses? What drives their entrepreneurial intentions? This section outlines entrepreneurship models and possible influences on an individual's decision to start a new business.

2.5.1 Ajzen's Theory of planned behaviour

According to Ajzen (1985) the behaviour and actions of humans follow implicit or explicit plans. This means that the decisions humans make are often planned whether deliberate or not. These actions that humans ultimately take, are informed by intentions. Not all intentions however, will result in actions. Ajzen (1985) states that some intentions will be altered while others are forgone. The goal of Ajzen was the assessment of how intentions (that drive action) are formed. He did this by analysing people's goals and plans. In addition, Ajzen argues certain factors may influence people to change their intentions. For example, there is an assertion that individuals who have tangible role models of entrepreneurs in their communities will tend to have a more favourable outlook of entrepreneurship than those who don't have entrepreneurial role models (Van Auken, Fry, & Stephens, 2006).

Ajzen together with Fishbein, formulated initially that intentions are influenced by attitudes to certain actions (Ajzen & Fishbein, 1980). They concluded further that attitudes are shaped by beliefs. That is, if a person's belief is positive towards a specific action , they are likely to have

a positive attitude towards that action which will ultimately result in their intention to act being formed. Beliefs are shaped by the social pressures that an individual perceives to be faced with.

An example of Ajzen's theory can be seen from an entrepreneurial perspective (Veciana, Aponte, & Urbano, 2005). Should an entrepreneur believe that society will view them favourably (positive societal pressure) they are more likely to have positive attitude towards entrepreneurship. A positive attitude toward entrepreneurship will results in the individual having an intention to start a business. Finally, that intention of the entrepreneur, will result in the individual creating a business. The entrepreneurs positive and negative beliefs and the weighting of attitudes in an individual's intentions will be driven by the relative importance that the individual opts to prescribe to the factor (Ajzen & Fishbein, 1980). Below is a diagrammatic representation of the theory:

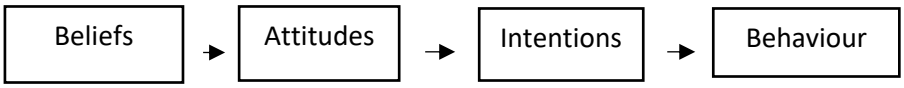


Figure 1: Model of Planned Behaviour (Ajzen, 1985)

The theory depicted above is sometimes referred to as the theory of planned behaviour (Ajzen, 1985). Owing to its popularity and effectiveness, the model has been used in numerous research studies to predict behaviour across diverse backgrounds and fields (Krueger & Carsrud, 1993; Pelling & White, 2009; Yazdanpanah & Forouzani, 2015).

An example of the application of the theory of planned behaviour is the study conducted by Gird and Bagraim (2008). The study was aimed at evaluating the entrepreneurial intent of final year commerce students at two universities in the Western Cape in South Africa. The theory of planned behaviour variables (beliefs and attitudes) were measured using Autio's 5-point Likert Scale.

The results of the multivariate analysis in the study showed that 27% of the variability of the student entrepreneurial intentions were explained by the theory of planned behaviour (Gird & Bagraim, 2008). Of the variables that were used to determine the theory of planned behaviour, prior exposure to entrepreneurship was seen to have high predicative power in determining entrepreneurial intent of final year commerce students. Other variables such as personality traits, demographic factors and situational factors did not have a significant impact on the entrepreneurial intent of the students. The study also found the theory that predicts behaviour that is planned, to be significant in shaping entrepreneurial intent.

Shook and Bratianu (2010) also used the theory of planned behaviour to assess the entrepreneurial intent of Romanian University students. They used a multiple regression analysis on surveyed data of 324 students. The study found that students perceptions of the desirability of creating a new venture and their perceived ability to be successful in running the venture to be significant determinants of entrepreneurial intent. The above studies show that the theory of planned behaviour may be used to assess the entrepreneurial intent of future CA's in South Africa.

2.5.2 Shapiros and Sokol Entrepreneurial event model

Shapiro and Sokol (1982) also formulated a framework to explain why individuals become entrepreneurs. This model is based on the entrepreneurial event. The premise of the theory is that human behaviour follows inertia until something disturbs or displaces that inertia. This disturbance is typically driven by perceptions of how the event will affect the individual. The displacement referred to is often negative, for example job loss, suffering insults and being unsatisfied with life, to name a few. Shapiro and Sokol (1982) offer examples were significant life events (disturbance to inertia) such as job loss and migration resulted in increased entrepreneurial activity in a country. The individuals had not changed but their respective perceptions had changed as a result of these displacement events.

2.5.3 Krueger and Brazeal Entrepreneurship Model

Krueger and Brazeal have developed a model to asses entrepreneurial potential (Krueger & Brazeal, 1994; Veciana et al., 2005). The model includes Azjen's theory of predicting behaviour together with the entrepreneurial event model formulated by Shapiro and Sokol. Kruger and Brazeal note that to start a new venture one must consider the activity both desirable and feasible (Krueger & Brazeal, 1994). Azjen's theory of planned behaviour helps define the terms desirable and feasible (Krueger & Brazeal, 1994). In addition, for a person to have an entrepreneurial intent, they should have a propensity to Act. Below is a diagrammatic representation of the model

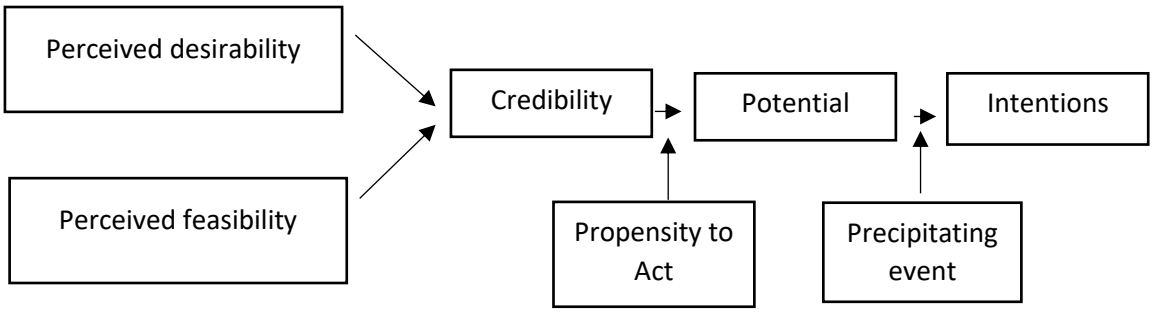


Figure 2: Entrepreneurial Model (Krueger & Brazeal, 1994)

Perceived Desirability refers to how attractive a particular action is to an individual (Krueger & Brazeal, 1994). From the perspective of Ajzen (1985), an action will be desirable if the person has a positive attitude towards it. Whether the person perceives the action to be attractive will be based on their own personal beliefs and social norms. Shapiro and Sokol (1982) take the definition of perceived desirability a step further by analysing peer, ethnic, family, professional and educational groups. For example, they mention that the larger the variety of entrepreneurs in a culture, the greater the probability that individuals in the culture will form companies.

On the other hand, Perceived Feasibility is linked to the theory of planned behavioural control introduced by Ajzen (1985). Ajzen defines behavioural control as the degree to which person finds an action easy or difficult to do (Ajzen, 1985). It therefore follows that an individual will find starting a business as feasible if they belief it is relatively easy for them to do. Factors such as availability of support, consultation and level of education may affect the feasibility of starting a new business by an entrepreneur (Shapero & Sokol, 1982).

Klapper and Leger-Jarniou (2006) applied the entrepreneurial model introduced by Krueger and Brazeal to assess the entrepreneurial intent of university students in three institutions of higher learning located in France. The study found that most students wanted to work for large organizations and did not intend to create their own businesses or work for a family business. In addition, the study found significant differences in the results obtained from engineering students and management (commerce) students due to them being exposed to different environments. The management students had more intent to start new businesses than the engineering students.

Veciana et al. (2005) also applied the Krueger and Brazeal entrepreneurial model to assess the entrepreneurial intent of university students in Catalonia and Puerto Rico respectively. The study concluded that both sets of students found the activity of creating a new business to be desirable. Only a small portion of the students indicated that it was feasible for them to start a new business.

2.5.4 The Dyer Entrepreneurial Career Choice Model

An entrepreneurial career choice model was developed by Dyer (1994) that illustrates the factors that influence a person to choose entrepreneurship as a career. He identifies that an individual's choice to select entrepreneurship as a career path will be influenced by individual factors, social factors and economic factors.

2.5.4.1 Individual Factors

Individual factors are internal characteristics that are specific to an individual's choice to become an entrepreneur (Dyer, 1994). Individual factors are commonly linked to entrepreneurial attitudes about the prospect of choosing entrepreneurship as a career path. Dyer argues that individual factors can be categorised into three main constructs, namely, locus of control, need for achievement and tolerance of ambiguity.

2.5.4.1.1 Locus of control

Locus of control refers to the degree to which people hold themselves accountable for events that occur in their lives (Gürol & Atsan, 2006). Studies show that the more accountable a person is for their actions, the more likely they will find entrepreneurship desirable as a career path (de Pillis & DeWitt, 2008; Kroeck, Bullough, & Reynolds, 2010; Mathieu & St-Jean, 2013).

Louden (1978) was one of the first scholars to measure locus of control. His study was aimed at evaluating whether there was a difference between how Asian and West Indian adolescent immigrants in Britain viewed locus of control. The study consisted of 76 respondents from local secondary schools in Birmingham. A questionnaire was asked to test the locus of control antecedent among the respondents. The questions asked included the following; (1) Do you believe your parents should allow you to make most of the decisions; (2) Are you often blamed for things that are not your fault; (3) Do you feel that most of the time it does not pay to try hard because things never turn out right anyway, to name a few. It was concluded in the study that those respondents who answered affirmatively to being able to alter the event described by the questions above showed higher locus of control than those that did not. This study therefore hypothesises as follows:

H1: Locus of control has a significant impact on CA students' entrepreneurial intent.

2.5.4.1.2 Need for achievement

Need for achievement refers to the degree to which a person wants to accomplish a specific outcome (Dyer, 1994). People with a high need to achieve typically seek challenging tasks, expect responsibility for them, and desire to perform tasks faster and better than their previous attempts (Shane, Locke, & Collins, 2003). Such individuals also expect to perform tasks faster and at a more superior level than others. Studies find that there is positive relationship between a need for achievement and the choice to become an entrepreneur (Gürol & Atsan, 2006; Rauch & Frese, 2007; Zeffane, 2013).

Steers and Braunstein (1976) were the first to develop the Manifest Needs Questionnaire, in order to measure the need for achievement attribute in a work setting. The study included 593 subjects who were employed in government, business, low level management, administrators, and self-employed entrepreneurs. The questions were based on a 7-point Likert scale. 5 questions were asked as follows; (1) I do my best work when my job assignments are fairly difficult; (2) I try very hard to improve on my past performance at work; (3) I take moderate risks and stick my neck out to get ahead at work; (4) I try to avoid any added responsibilities on my job and (5) I try to perform better than my co-workers. Results showed that the above questions were internally consistent. Moreover, individuals that answered more affirmatively to the statements (with the exception of question 4) above where seen to have a higher need for achievement then those that did not.

Lam, Azriel, and Swanger (2017) empirically tested the need for achievement antecedent. In their study, they examine that factors that influence the entrepreneurial aspirations of individuals pursuing a career in public accounting. The results of the study differ with prior research in that they find no link between need for achievement and the accountants career aspirations to start their own practise.

This study therefore hypothesises as follows:

H2: Need for achievement has a significant impact on CA students' entrepreneurial intent.

2.5.4.1.3 Tolerance of ambiguity

Lastly, Tolerance of ambiguity is the likelihood that an individual views challenging tasks positively, when information relating to those tasks is obscure or missing (Furnham & Ribchester, 1995). Studies find that individuals with a high tolerance of ambiguity are more likely to choose entrepreneurship as a career than those that do not (de Pillis & DeWitt, 2008; Murugesan, 2010; Wagener, Gorgievski, & Rijsdijk, 2010).

Herman, Stevens, Bird, Mendenhall, and Oddou (2010) conducted a study to measure the link between tolerance of ambiguity and performance of individuals in a global work environment and a cross – cultural setting. A 16-item questionnaire, in the form of a 5-point Likert scale was used to evaluate responses of individuals from diverse upbringings. The statements on the questionnaire ranged from ''Strongly Agree'' to ''Strongly Disagree''. Some of the statements outlined included the following; (1) The sooner we all acquire similar values and ideals the better; (2) The majority of salient decisions are based upon incomplete information; (3) What we are used to is always preferable to what is unfamiliar, (4) Prosperous jobs are ones where it is always clear how they ought to be done what needs to be done, (5) Teachers

or supervisors who hand out vague assignments give people a chance to show initiative and originality and (6) I avoid settings where people do not share my values.

From the study, Herman et al. (2010) was able to group tolerance of ambiguity into 4 main categories. These categories include valuing diverse others, change, challenging perspectives and unfamiliarity. The study found that Individuals have a high tolerance of ambiguity if they value the diversity of others, are open to change, enjoy unusual tasks and are able to adapt to new environments and settings.

2.5.4.2 Social Factors

The Dyer entrepreneurial career choice model also references social factors as having the ability to impact on the choice to pursue the entrepreneurial career path. Social factors include support from families, role models and communities (Dyer, 1994).

2.5.4.2.1 Family support

The family support construct is defined as the degree of support that one receives from their family to pursue an entrepreneurial career (Chang, Memili, Chrisman, Kellermanns, & Chua, 2009). It is argued that family support, particularly from business oriented family members, is likely to build the informational and behavioural skills necessary for self-employment (Carr & Sequeira, 2007). Studies show that people with a high degree of family support tend to be more likely to choose entrepreneurship as a career path than those that do not have a high degree of family support (Abdullah & Sulaiman, 2013; Chang et al., 2009; Latha & Murthy, 2009).

Carr and Sequeira (2007) conducted research on the effect of family business experience on the choice to start a new business. In their study they profiled entrepreneurs looking at whether there was an impact on the level of responsibility and prior exposure to family business on their choice to start their own businesses. The sample consisted of individuals from various ethnic, technology and small business networking organizations and start-ups. Respondents were given a questionnaire to complete from which a factor analysis was used to analyse the results.

Three major drivers where seen to influence the entrepreneurial career choice from a family perspective in the study conducted by Carr and Sequeira (2007). One of these factors was perceived family support. Perceived family support is linked to an individual's belief on the degree of support they will likely receive if they start a new business.

Empirically, Shen and Osorio (2017) evaluated the impact of family support on the entrepreneurial intent of college students in the US. The study found that a positive relationship existed between perceived family support and desirability and feasibility to start a new business.

This study therefore hypothesises as follows:

H3: Family support has a significant impact on CA students' entrepreneurial intent.

2.5.4.2.2 Role models

The role models construct refers to the presence of family members, relatives or other entrepreneurs in one's life, that encourage or motivate a person to pursue entrepreneurship as a career path (Du Toit & Muofhe, 2011). Role models often teach by example, offer encouragement or give motivation and inspiration to budding entrepreneurs (Bosma, Hessels, Schutjens, Van Praag, & Verheul, 2012). Studies have found a strong link between having entrepreneurial role models and one's decision to pursue entrepreneurship as a career path (Bosma et al., 2012; Du Toit & Muofhe, 2011).

Nauta and Koklay (2001) conducted a study to assess the impact that role models have on students' academic and vocational career decisions. The researchers conducted a confirmatory factor analysis to develop a measure of role model influence on students' academic and career decision making processes. They call this measurement instrument the Influence of Others on Academic and Career Decisions Scale (IOACDS). A questionnaire in the form of a Likert response was given to respondents, which included 183 students at a large institute of higher learning in the US. Results of the study showed that the inspiration subscale (measures the effect of role models) had a considerable effect on the vocational choices in careers made by students.

Du Toit and Muofhe (2011) had similar conclusions to those reached by Nauta and Koklay (2001). In addition to assessing the effect of role models in shaping entrepreneurial intent, the study conducted by Du Toit and Muofhe (2011) also looked at the impact of education on entrepreneurial intent. The surveyed respondents consisted of both entrepreneurship and non-entrepreneurship students at the University of Johannesburg (UJ). The study found a positive correlation between entrepreneurial intention and the presence of role models.

This study therefore hypothesises as follows:

H4: The presence of role models has a significant impact on CA students' entrepreneurial intent.

2.5.4.2.3 Community support

Lastly, high community support has also been found to positively impact the entrepreneurial career choice of an individual (Tas, Citci, & Cesteneci, 2012). Community members, leaders and the government may encourage entrepreneurial career choice through providing information, advice or funding to support the career choice (Tas et al., 2012).

Liao and Welsch (2005) measured the community support antecedent in their study of the impact of social capital in new venture creation. Social capital is defined as the set of societal resources engrained in relationships. Individuals are seen as actors who are shaped by societal factors. Liao and Welsch (2005) argue that social capital is crucial as it enables entrepreneurs to access funding, key competitive information and to increase the number of potential buyers. Social capital can be categorised into three dimensions, structural capital, relational capital and cognitive capital.

Structural capital refers to the overall pattern of connections between actors (Nahapiet & Ghoshal, 1998). It relates to the number of people that one can reach in their respective social circle. Structural capital allows entrepreneurs the ability to access information, resources and support that is pivotal to new venture creation. Someone with high structural capital though personal networks, will thus have a higher probability of successfully creating new ventures and identifying new business opportunities compared to someone who does not.

Relational capital refers to the type of relationships people have developed through a history of interactions (Granovetter, 1998). The focus of relational capital is on the degree of trust, truthfulness and friendliness of relationships. An entrepreneur with high level of trust is able to leverage this quality trait for his or her own benefit. By having high relational capital, knowledge, resources and information (to assist in creating successful businesses) may be obtained easily by entrepreneurs from individuals in their social network.

Cognitive capital is defined as the shared representations, interpretations and systems among parties in a community (Nahapiet & Ghoshal, 1998). It is sometimes referred as societal norms. If communities place emphasis on entrepreneurial spirit, they are more likely to accept failure and open access to information to parties. This means individuals will be willing to start business as it is a shared norm.

In their study, Liao and Welsch (2005) measured the social capital effect in entrepreneurs using Likert scale telephonic questionnaires to a sample of 31,261 adults in the US. Statements included items such as the following: many of my family and kin have started firms before; state and local governments provide good support for those starting firms; banks and

other investors go out of their way to help those starting new firms, Independence in general is spured on among the youth and entrepreneurs are covered favourably by local news outlets. The study found a positive correlation between these constructs of community support and entrepreneurial intentions of surveyed respondents.

In a South African Context, Malebana (2014) conducted a study to evaluate the factors that influence university students in the Limpopo Province to become entrepreneurs. The students were studying various commerce related degrees. The study found that a strong link existed between entrepreneurial (community) support and entrepreneurial motivation. That is, entrepreneurs that had support structures in their communities were more likely to be motivated to start a new business then those that did not.

This study therefore hypothesises as follows:

H5: Community support has a significant impact on CA students' entrepreneurial intent.

2.5.4.3 Economic Factors

Economic factors refer to the economic conditions surrounding a person at the time they make the decision to become an entrepreneur (Dyer, 1994). The decision is influenced by push and pull economic factors (Dawson & Henley, 2012). Push factors are adverse economic conditions that result in a person having no alternative career option but to pursue entrepreneurship (van der Zwan, Thurik, Verheul, & Hessels, 2016). Pull factors are positive economic conditions (such as increased economic growth) that create an opportunity for people to profit from starting new businesses (van der Zwan et al., 2016). Dyer (1994) argues that these economic conditions shape the decisions made by a person to opt for the entrepreneurial career path.

An example of a push factor in South Africa is the high unemployment rate (The World Bank In Africa, 2019). With a lack of jobs in the economy individuals resort to entrepreneurship as a solution in earn a living (Shane, Kolvereid, & Westhead, 1991). Mkubekeli and Cronje (2018) argue that some of the other push factors for small scale entrepreneurs in South Africa include poverty, culture and values. Culture for example may push one to seek independence in work thereby influencing an individual to pursue entrepreneurship as a career path (Hilson, 2009). Furthermore, not sharing the same values as your managers as an employee in an organisation may result in disagreements with them (Venter et al., 2015). If these disagreements persist over multiple work opportunities an individual may be pushed to entrepreneurship as a career path to avoid the work-related conflicts with managers (Mkubekeli, 2016).

Example of pull factors towards entrepreneurship in South Africa include independence, achievement and recognition (Mkubukeli & Cronje, 2018). Barringer (2012) finds that individuals are primarily drawn to entrepreneurship in order to obtain various monetary and independence related goals. These individuals wish to be recognised for their efforts and therefore believe entrepreneurship is a tool to achieve these goals.

This study therefore hypothesises as follows:

H6: Students' economic situations have significant impact their entrepreneurial intent.

2.5.4.4 Prior experience working, childhood events, level of education, peer influence and prior new venture exposure.

Dyer (1994) also argues that prior experience in the working environment, childhood events, level of education, peer influence and prior new venture exposure can influence a person's decision to start a new firm. Looking at peer influence as an example, studies find that people who have colleagues at work who have started a business before are more likely to become entrepreneurs than those who do not have colleagues who have started businesses before (Nanda & Sørensen, 2010).

2.6 Synthesis

Chapter 2 described entrepreneurship models and factors that are typically used to evaluate the entrepreneurial intent of individuals. These included Ajzen's model of predicting behaviour , Shapiro and Sokols' entrepreneurial model that is based on specific events , Krueger and Brazeal Entrepreneurship Model and Lastly Dyer's Model of Entrepreneurial Careers.

Ajzen's main conclusion is that behaviour to start a new firm will be driven by an individual's intentions. These intentions are the product of a person's individual beliefs and attitudes. The more favourable a person attitudes and beliefs are to entrepreneurship the more likely they will start a new firm. On the other hand, Shapiro and Sokol argue that entrepreneurial intent is driven by the entrepreneurial event. That is, an extreme event like job loss can cause people to pursue entrepreneurship. Krueger and Brazeal proceed to combine the two models (Ajzen and Shapiro) into an entrepreneurial model. They deduce that a person will start a new business if three conditions are met, namely, they perceive the creation of business as desirable, secondly, they perceive creating a business as feasible and lastly, they have a propensity to act. This means that for a future CA to show an entrepreneurial intent they would need desire the act of starting a business, find it feasible to start a business and have the propensity to act and start a business.

Lastly, Dyer's Entrepreneurship Career Model was analysed. Dyer outlines variables that influence entrepreneurial career choice. These include social factors, economic factors, individual factors, level of education, work experience, early childhood events, prior new venture exposure and peer influence.

The prior section provides a foundation against which the entrepreneurial intent of future CA's can be assessed. The antecedents from the literature show that entrepreneurial intentions can be broad.

Chapter 3: Methodology and Data Collection

3.1 Research methodology

The research follows a quantitative methodology. Quantitative research is used to quantify a problem by way of generating numerical data or data that can be transformed into usable statistics (Labaree, 2009). It can be used to quantify attitudes, opinions, behaviours and other defined variables. Given the objective of this research is to determine the entrepreneurial intent of future CA's, a quantitative methodology is most appropriate given its ability to be used to quantify the opinions and attitudes of future CA's for the purpose of predicting future behaviour in relation to starting a new business.

In addition, various precedents have been established from prior literature in which quantitative methodology was used to determine entrepreneurial intentions. This study is consistent in its adoption of the method.

3.2 Measuring Instrument

A questionnaire was used to evaluate future CA's attitudes towards entrepreneurship. The questionnaire was sent to CA trainees and 4th year accounting science students at Wits. The questions were based on the variables identified in the literature review relating to factors influencing the entrepreneurial intent of individuals. These variables are denoted by the letter Q, ranging from Q1 to Q51. The questionnaire can be found in Appendix A. The questions have been adapted from Peterman and Kennedy (2003), Veciana et al. (2005) and Bignotti (2013). A 7-point Likert scale was used to assess the responses of the respondents.

The questionnaire consists of 52 questions in total. Questions Q1 to Q10 relate to perceived desirability, feasibility and the propensity to act antecedents that are discussed by Krueger and Brazeal (1994) and Peterman and Kennedy (2003). Questions Q11 to Q 42 relate to Dyer's Model of Entrepreneurial Career Choice introduced in chapter 2. Questions Q11 to Q42 have been grouped into traditional antecedents of the Dyer Model of Entrepreneurial Career choice. These are need for achievement, locus of control, community support, role models and family support. The questions are intended to evaluate the impact of these traditional antecedents on the career choice of a future CA and to determine the entrepreneurial intent of the future CA.

Lastly, variables Q 43 to Q 51 are a combination of general antecedents. They include the variables Dyer (1994) introduced relating to level of education, prior work-related experience, prior new venture exposure and peer influence, as well as background information for each

respondent. These questions were included to evaluate if significant differences existed between the different groups of future CA's. Below is a diagrammatic illustration of the breakdown of the questions:

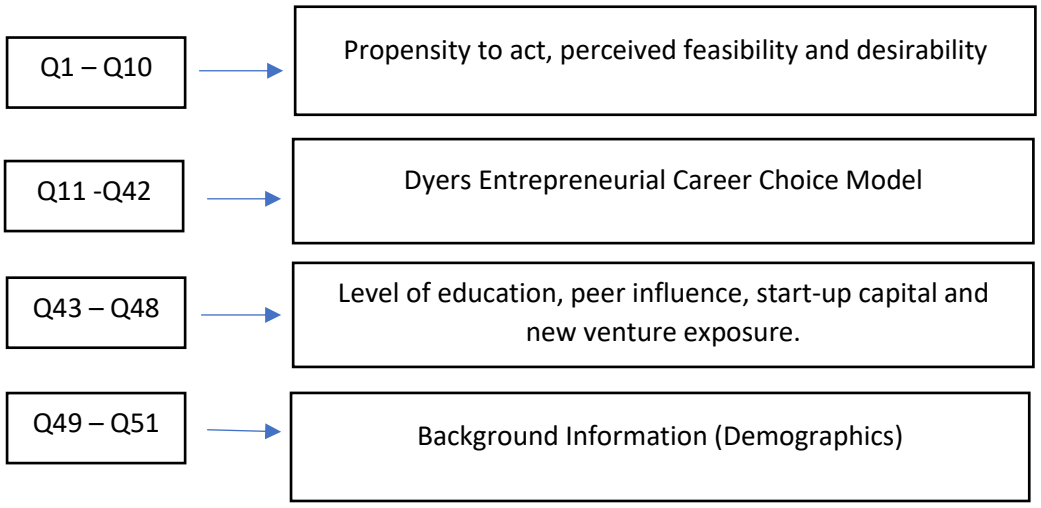


Figure 3: Questionnaire Breakdown

As can be seen from the questionnaire structure, each question was chosen with the purpose of measuring the entrepreneurial intent of future CA's. Questions 1 and 2, relating to propensity to act, were mainly included to get a high-level overview of whether future CA's had started a business before or wished to do so in the future. Questions 3 – 47 were included to measure the presence of the traditional antecedent factors related to entrepreneurial intent in future CA's. The questions were chosen to determine if any of the factors (that indicate entrepreneurial intent) would be present in future CA's. Lastly, questions 48 – 52 were included to evaluate whether significant differences existed between the different groups of future CA's in relation to entrepreneurial intent.

3.3 Statistical Analysis

Factor Analysis was used to evaluate the entrepreneurial intent of future CA's. Factor Analysis can be defined as an interdependence, multivariable, statistical technique, whose primary objective is to extract factors by defining an underlying structure among the variables being tested (Hair, Black, & Barry, 2010). It is commonly used as a data reduction technique. Given the many variables that were identified in the literature as influencing entrepreneurial intent, Factor Analysis was chosen to be able to identify the key variables that influence a future CA's decision to start a new business.

Using Factor Analysis, the variables identified to potentially influence the entrepreneurial intent of a future CA were grouped together to compute a correlation matrix and subsequently an

unrotated factor matrix. To avoid an uneven distribution of the variances of the factors, an Orthogonal Varimax Rotation technique was used (Dimi, Padia, & Maroun, 2014; Hair et al., 2010; Malhotra, 1996; Rummel, 1988). The technique resulted in a more even distribution of variances among the factors being tested in the analysis, allowing for more accurate factor loadings.

The final step was to identify significant loadings in the rotated factor loading matrix. The significance of a factor loading (in relation to a variable) will depend on the sample size of the respondents in the study. A method similar to statistical significance was used to evaluate the significance of factor loadings. This method combines the concept of statistical power and the use of a significance level. The significance level of 5% and a power level of 80% was used in this study. At this significance level, with a sample size of 120 respondents at minimum, a factor loading of 0.45 was seen to be significant (Hair et al., 2010). Only variables with factor loadings that exceed the significant factor loading threshold were retained.

A t – Test was also used to further enhance the analysis of entrepreneurial intent between the different groups of future CA's. t – Tests are appropriate as they are used to assess if there are significant differences in the mean scores of a particular variable across two groups. This analysis is important particularly as the study aims to provide specific suggestions based on the results to avoid the solutions being too broad or generic. Furthermore, the different groups included were categorised based on place of practise and gender. A 5% level of significance was used. Given a 5% level of significance, differences in the sample will only be statistically significant if the p – value result is lower than 0.05.

3.4 Sample size and sample selection

To use Factor Analysis the sample size should have as a minimum 3 times as many observations as the number of items in the questionnaire (Hair et al., 2010). In this study, there were 40 items (Q3 – Q42) to which the factor analysis was applied. Given this number of variables, the minimum sample size of future CA's to be surveyed should be at least 120. The total number of respondents that participated in the study were 218 people.

The survey was completed by CA trainees at various firms and fourth year Accounting Science students at Wits. Third year students and below were not selected because it is very uncertain at that stage whether they will ultimately become CA's. Fourth year students in contrast have specifically chosen a post graduate diploma in accounting or honours with specific intent of becoming CA's. In addition, fourth year students are in their last academic leg prior to qualifying as CA's and are very likely to end up as CA's in the future.

CA trainees at firms and 4th year students were chosen as part of the sample because they are individuals that meet the definition of a 'future CA', outlined in the beginning of the study. In addition, these individuals are under a fixed accounting curriculum; therefore, the research may show how SAICA as a professional body through its competency framework guides universities in accounting to discharge their responsibilities in fostering entrepreneurship, through the students' level of awareness and keenness to start new ventures. Moreover, we may also better understand how the fixed nature of the curriculum and training programmes of future CA 's affects their attitudes towards entrepreneurship.

3.5 Research procedure

A pilot study was carried out first. The pilot study involved sending out both electronic and manual surveys to Academic Trainees at Wits. Academic Trainees are 1st year SAICA article clerks who have decided to do their first year of articles in Academia. Given that the Academic Trainee are 1st year SAICA trainees they meet the definition of future CA's according to the study. The respondents in the pilot study were 6 in total. The electronic survey was compiled using Google Forms. The objective of the pilot study was to obtain information on the structure of the survey to determine if it needed any modifications. No major modifications were deemed necessary to the questionnaire. Only minor adjustments to the phrasing of questions were made, to make the questions clearer to the respondents.

Following the pilot study, questionnaires were sent both manually and electronically to trainees at various firms and 4th year students at Wits. The inclusion of online surveys allowed for the data to be collected centrally resulting in quicker response times, time saving and resource conservation in relation to the data capturing process (Ilieva, Baron, & Healey, 2002). In contrast, manual responses have higher response rates compared to online surveys. Both methods were used in the study to allow for an optimal sample size.

3.6 Validity and Reliability

The questionnaire's Cronbach's alpha was calculated to measure its internal consistency. In computing the initial correlation matrix in the study (to evaluate the variables that could potentially influence the entrepreneurial intent of future CA's), the Measure of Sampling Adequacy (MSA) was also calculated. The overall MSA value of the correlation matrix should always be above 0.50 before proceeding with the factor analysis (Hair et al., 2010). In addition, the Bartlett Test of Sphericity was carried out to ensure that there were significant correlations among the variables.

In conducting the factor analysis, only factors that have eigenvalues greater that one were retained. This approach of extracting factors based on eigenvalues is known as the latent root criterion method (Hair et al., 2010). This approach resulted in enhanced reliability, as factors that do not have eigenvalues greater than one are omitted from the final analysis, resulting in a more meaningful analysis of the true factors that affect the entrepreneurial intent of future CA's.

The use of questionnaires as research instruments in entrepreneurship studies is well established. Questionnaires have been used successfully to assess the entrepreneurial intent of individuals. For example, Veciana et al. (2005) conducted a study on university students' attitudes towards entrepreneurship. The study involved using a questionnaire directed at university students in two universities. The questionnaire allowed for the assessment of student intentions and for conclusions around their intentions towards entrepreneurship to be reached. Peterman and Kennedy (2003) has also used a questionnaire successfully in assessing student attitudes towards entrepreneurships. This research used questions used in both studies to develop the questionnaire. Finally, Bignotti (2013) also used a questionnaire were youth attitudes towards entrepreneurship were determined in South Africa.

Chapter 4: Analysis of results

4.1 Descriptive Statistics

The statistical analysis was done using EViews 10. Descriptive statistics were calculated to evaluate the entrepreneurial intent of future CA's in South Africa and to analyse the results of the survey. Furthermore, Appendix B provides an illustration of how the questions in the questionnaire were coded. In addition, Appendix C includes the mean scores and standard deviations of each of the 51 questions intended to assess the entrepreneurial intent of future CA's. The possible scores ranged from 1 to 7, where 1 was "strongly agree" and 7 was "strongly disagree".

4.1.1 Demographic variables

In this section, the variables analysed were, gender (DEM GENDER), place of practice (DEM PP) and level of study (DEM TRAIN). These variables were assessed by asking questions 49 – 51 in the Questionnaire. The purpose of asking these questions was to determine whether the responses to questions 1 – 48 would differ among the different groups to which the respondents affiliate.

Level of Study (DEM TRAIN): Table 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4th year student	113	51.8	51.8	51.8
	1st year trainee	51	23.4	23.4	75.2
	2nd year trainee	30	13.8	13.8	89.0
	3rd year trainee	24	11.0	11.0	100.0
	Total	218	100.0	100.0	

The results relating to level of study show that the majority of the future CA respondents were 4th year students, accounting for 51.8% of the total sample. First year trainees were the second largest group accounting for 23.4% of the respondents. Second year trainees and 3rd year trainees were the lowest, accounting for 13.8% and 11% respectively. These results show that majority of the future CA sample are at an entry level with respect to their level of training.

Place of Practice (DEM PP): Table 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TIPP	72	33.1	33.1	37.6
	TOPP	33	15.1	15.1	52.8
	NA to me	113	51,.8	51.8	100.0
	Total	218	100.0	100.0	

In terms of place of practice, 37.6 % of the respondents were training in public practice (TIPP). The total percentage of respondents training outside public practice (TOPP) were 15.1 %. The rest answered not applicable to me, with respect to place of practise since they were 4th year students who had not entered the workforce yet.

Gender (DEM GEN): Table 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	81	37.2	37.2	37.2
	Female	137	62.8	62.8	100.0
	Total	218	100.0	100.0	

In terms of gender, 37.2% of the respondents identified as males. A large majority, 62.8%, of the respondents identified as females. The questionnaire asked individuals to indicate their gender in order to be able to assess whether gender influences future CA ‘s entrepreneurial intentions.

4.2 Factor Analysis

Exploratory factor analysis was conducted to identify the factors that influence the entrepreneurial intent of future CA’s. A combination of tests were also conducted to ensure the validity and reliability of the factor analysis results. The first of these tests was to calculate the Cronbach’s alpha to ensure the internal consistency of the 48 questions asked in the questionnaire, to which the factor analysis would be conducted. The results of the Cronbach’s alpha are shown in Table 5. The table shows a standardized Cronbach alpha of 0.722 which exceeds there 0.70 threshold proposed to be acceptable (Hair et al., 2010; Santos, 1999). This shows that the questions are internally consistent, and that the factor analysis can be conducted on them.

Reliability Statistics: Table 5

Cronbach's Alpha Based on Standardized Items	N of Items
0.722	48

Secondly, an analysis was conducted to see if the overall Cronbach's alpha could be enhanced if questions were deleted from the questionnaire. The results of the analysis are included in Appendix D. The results show that the removal of any question would reduce the Cronbach's alpha value. It was therefore decided not to delete any question from the analysis.

Prior to conducting the factor analysis, the Kaizen – Meyer – Olkin Measure of Sampling Adequacy (KMO) and the Bartlett Test of Sphericity were conducted to enhance the reliability of the factor analysis conducted. The results can be found in Table 6 below. The results show that the KMO (0.726) is close to 1 and greater than 0.5. The results of the KMO show that the factor analysis can be conducted as there is enough variation in the sample. In addition, The Bartlett test rejects the null hypotheses (sig <0.05) of no relations between variables. This is because the approximate chi square is significant at 4062.619 for 1128 degrees of freedom (Dimi et al., 2014). The Bartlett test therefore also shows that the factor analysis can be conducted as enough correlation exists between the variables.

KMO and Bartlett's Test: Table 6

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.726
Bartlett's Test of Sphericity	Approx. Chi-Square	4062.619
	Df	1128
	Sig.	.000

Appendix E illustrates the initial communality values relating to the 48 variables in the analysis. Communalities measure the correlation of each variable to each factor. The majority of the communality values were high overall, supporting the use of factor analysis.

The results of the extraction of factors during the factor analysis can be found in Appendix F. The initial extraction process identified 15 factors that influence future CA's entrepreneurial intent. These 15 factors were extracted as they had eigenvalues greater than 1. The cumulative percentage of variance explained by the factors is 67.799%. Upon the completion of the extraction of factors, they were then rotated using a Varimax Rotation Method. All the

15 retained factors had squared factor loadings that exceeded 0.45 level identified to be significant. As a result, all factors would be retained after the rotation took place.

The factor analysis achieved its data reduction objective because the number of variables were 48 before the analysis were reduced to 15 factors. To enhance the analysis further it was decided to increase the threshold with respect to eigen values to see which factors were the strongest determinants of future CA entrepreneurial intentions. It was decided to select the factors that had eigen values greater than 2 or close to 2. These factors are displayed in Table 7 below.

Table 7: Factors Extracted

Factor 1	*Family and friends Influence* Q36 - My parent(s) would feel positively about me deciding to start a new business Q37 - My close friends would feel positively about me deciding to start a new business Q38 - My co students/ colleagues would feel positively about me deciding to start my own business Q39 - My brother/ sisters would feel positively about me deciding to start my own businesQ41 - My neighbour would feel positively about me deciding to start a business Q40 - My relatives would feel positively about me deciding to start a new business Q42 - In general, my acquaintances would feel positively about me deciding to start a new business
Factor 2	*Perceived desirability and feasibility of starting a business* Q2 - Do you intend to start a new business of your own someday Q7 - How sure are you of yourself, that you might be a successful entrepreneur if you started a new business Q8 - Would you say starting a new business is something you would love doing Q10 - If you were to start a new business, how enthusiastic would you be about the process
Factor 3	*Locus of control*

	Q30 - I feel that on the majority of the time, trying hard is futile as things never turn out the way you plan any way Q32 - I believe that the best way to resolve problems I am encountered with in life is to simply ignore them Q33 - I believe that doing my tutorials/ work assignments does not have an impact on my performance at work/school
Factor 4	*Career Mentor* Q26 - There is someone I am trying to be like in my career pursuits Q27 - There is no one I am trying to be like in my career pursuits
Factor 5	*Role Model* Q14 - There is someone I can count on to be there if I need support when I make career choices Q16 - There is someone who helps me weigh the pros and cons of the career choices I make Q17 - There is someone who tells or shares general strategies for a successful life with me
Factor 6	*Community Support* Q20 - Banks and other investors go out of their way to help new businesses get started Q21 - Young people are encouraged to be independent and start their own businesses Q22 - State and local governments provide good support for those starting businesses Q25 - The local media does a good job covering local businesspeople

Factor 1: Family and Friends Influence

In total 7 items from the questionnaire (Questions 36, 37, 38, 39, 40, 41 and 42) loaded into factor 1. These variables relate to the family and friends support antecedent initially tested by Carr and Sequeira (2007). This resulted in factor 1 being named ‘family and friends influence’. The factor analysis revealed that this was the strongest factor found to influence the entrepreneurial intent of future CA’s. The eigenvalue of the factor was the highest out of all

factors as displayed in Appendix F. This factor was found to explain about 13,099% of the variation in the sample of surveyed future CA's. The results show that future CA's entrepreneurial intentions are largely influenced by how they perceive their family and friends will react to their decisions. That is, the more supportive they believe their family, friends, acquaintances and neighbours are to their decision to become an entrepreneur, the more likely they will start new businesses.

Hypothesis 3 (from section 2) had stated that family support has a significant influence on the entrepreneurial intent of future CA's. The study thus accepts this hypothesis as being true, due to the family support emerging as significant factor from the factor analysis.

The study therefore leans towards other studies that found a positive correlation between family support and entrepreneurial intentions (Abdullah & Sulaiman, 2013; Chang et al., 2009; Latha & Murthy, 2009). Appendix B shows that the mean scores for questions 36, 37, 38, 39, 41 and 42. The closer the score is to 1 the more the respondents agreed with the statement of each question. Given the mean scores displayed, the overall average mean score for the factor can be determined to be 2.62. This means that most of the surveyed future CA's agreed that their family, friends, acquaintances and neighbours would react positively if they were to start a new business.

Family is a significant institution that people rely on to make entrepreneurial career decisions (Aldrich & Cliff, 2003). Moreover, family and friends often shape an individual's behaviour and life choices (Powell & Eddleston, 2013). Given that the family and friends antecedent has loaded as the strongest factor influencing entrepreneurial intent of future CA's, it is important to understand why this was the case.

Firstly, Zellweger, Sieger, and Halter (2011) argue that university students and other young entrepreneurs are highly dependent economically and emotionally for support on their parents or guardians. These young individuals rely extensively on these family members for support as form of protection from potentially negative or stressful events that could be compounded if they were to be left to their own devices (Cardon, Foo, Shepherd, & Wiklund, 2012). In the study, most respondents (51.8%) indicated they were 4th year students. Even those that indicated that were working, are entry level professionals who are relatively new to the working space. The majority of future CA's are therefore most likely still highly dependent on their families for financial and emotional support. This would explain why future CA's viewed family support as being critical in their decisions to start a new business. At this stage in their lives, their families perceived approval is an important factor in deciding to become an entrepreneur given that they are still dependent on their families for economic and emotional support.

Secondly, family and friends often have a social impact on the career choices made by individuals (Guan et al., 2015). An example of this effect can be observed by the amount of time university students and young professionals spend with their friends. Given that university students often spend large periods of time with their friends they rely on them for social context in the decisions they take (Larson & Richards, 1991). The friends can offer encouragement or discouragement in the selection of the entrepreneurial career choice (Ireland & Lent, 2018). Future CA's would fall into the category of young people with high social interactions with friends. This would especially be the case for the 4th year students. Given this proximity to friends that future CA's are likely to have, it is not surprising why the question loaded significantly into the factor.

Lastly, family, friends and even acquaintances and neighbours can act as a catalyst in encouraging entrepreneurial action (Zhu, Fan, & Zhao, 2019). Individuals can see themselves in their family members, friends, acquittances and neighbours who are successful entrepreneurs. By seeing these family members, future CA's will likely want to follow in their footsteps or at least be influenced to pursue entrepreneurship as a career path.

This factor shows that for future CA's; family, friends, neighbours and acquaintances perceived reactions play an important role in shaping their entrepreneurial intentions. This further implies that if future CA's are too be encouraged to start a new business, a culture would need be created within such families, friends, neighbours and acquaintances that is favourable towards entrepreneurship as a career path.

Factor 2: Perceived venture desirability and feasibility

The rotated factor matrix in Appendix F, also showed that perceived venture desirability and feasibility was the second strongest determinant of entrepreneurial intentions of future CA's. The factor explained about 7.156% of the variation in the responses of future CA's in the survey. The items that loaded on the factor were questions 2, 7, 8 and 10. These questions related to the traditional antecedents relating to perceived venture desirability and feasibly identified in the literature (Krueger & Brazeal, 1994; Peterman & Kennedy, 2003; Shapero & Sokol, 1982). It is because of this link that it was decided to name factor 2 'perceived venture desirability and feasibility'.

The results above show that the entrepreneurial intentions of future CA's are also largely influenced by their individual perceptions of whether starting a business is both desirable and feasible. That is, a future CA would only start a new business if they both desired to do so and believed that they were capable of staring such business.

The mean score of the questions that loaded for the factor is 2.125. The mean score of the factor implies that the majority of the surveyed future CA's believed they would love the idea of starting a business and that they would be able to do it successfully.

Future CA's are highly educated with degrees and honours equivalent qualifications specialising in audit, tax, management accounting, financial accounting and other business related pervasive and elective skills (Fouché, 2013; Strauss-Keevy, 2012). It is thus not surprising that these educated individuals would indicate that they were competent enough to start new business and that being an entrepreneur was feasible (Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011). The results of this study are consistent with those found in other studies finding a positive relationship between having studied commerce related subjects in university and perceived venture desirability and feasibility (Klapper & Leger-Jarniou, 2006; Sata, 2013).

Despite future CA's indicating that they perceive the creation of new businesses to be both desirable and feasible, only a small percentage of them have started a business before, as illustrated in the later section 4.4. It is possible that the academic and training programmes are very intense resulting in many future CA' s having little time to explore this career option. In addition, entrepreneurship involves risk taking. The SAICA competency framework specifically highlights risk management as one of the core competencies future CA's should learn. An inherent clash exist between the qualities that make a good entrepreneur in relation to risk taking and what future CA's are taught. As Peterman and Kennedy (2003) found in their study , the educational programme an individual is exposed to can influence the career they ultimately select. It therefore means that the training programme to which future CA's are exposed would need to be altered to encourage the act of starting a new business.

Factor 3: Locus of control

The items that loaded for the third factor were questions 30, 32 and 33. These questions related to the locus of control antecedent identified in the prior literature to shape entrepreneurial career choice and intentions (Ayodele, 2013; Brockhaus, 1975). This is the reason why this factor was named 'locus of control'. This made locus of control the third most influential determinant of the entrepreneurial intentions of future CA's.

Hypothesis 1 had stated that locus of control has a significant influence on the entrepreneurial intent of future CA's. The study accepts this hypothesis as being true, due to locus of control emerging as significant factor in the factor analysis.

The results show that a large portion of a future CA's entrepreneurial intentions can be attributed to the locus of control factor. This outcome is consistent with other studies that also find a correlation with respect to entrepreneurial intent and locus of control (de Pillis & DeWitt, 2008; Musdalifah, 2015; Sata, 2013).

The mean scores for the items that loaded for factor 3 (question 30,32 and 33) is 5.61. The results show that the future CA's believe in general that they had control over the events and circumstances that occur in their lives, which is a characteristic that is consistent with entrepreneurs. For example, when asked whether they believe that it's better to ignore problems you are encountered with (question 33) the future CA's answered with a mean score of 5.79, implying that they disagree with the statement.

Barón and Cobb-Clark (2010) finds that individuals with high locus of control, have a high probability of finishing secondary school, obtaining university rank and ultimately obtaining their qualifications. Future CA's are highly educated. At the very least a future CA would have a BCom degree in Accounting with some even having honours equivalent qualifications and having passed one or two professional exams. This study is therefore consistent with the literature given that these highly educated individuals have shown a strong internal locus of control.

Individuals with a high locus of control tend to have high analytical skills, problem solving abilities and respond to tasks to gain cognitively rather than to gain financial incentives only (Coleman & DeLeire, 2003). The bedrock of the CA profession is formation of leaders in the business landscape. Future CA's in training are exposed to different industries and performing different tasks with the aim gaining essential competencies. Future CA's are equally exposed to problem solving both theoretically and practically. It is these working conditions that mould the internal locus of control of future CA's. As a result of these inherent qualities, it is not surprising that future CA displayed high levels of locus of control.

The study shows that the internal locus of control quality is an inherent characteristic present within future CA's. This means that any alterations to the current training programmes or curriculum (with the aim of encouraging entrepreneurial activity in this group of individuals) should be weary not to compromise these qualities.

Factor 4: Career Mentors

The fourth most influential factor in determining the entrepreneurial intent of future CA's is named the 'Career Mentor' factor. This is because the questions that loaded into this factor (question 26 and 27) related to the career mentor and role model antecedents introduced by

Dyer (1994). The factor explains 4.601% of the variation in the responses of the future CA's in the study. The results show that career mentors play an important role in shaping the entrepreneurial intentions of future CA's.

The mean score for the factor is 3.79. The mean score of the factor implies that the surveyed future CA's believed they had someone who they were aspiring to become and who advised them. On average, future CA's somewhat agreed that they were aspiring to be like someone in their career pursuits.

Numerous prior studies have found a correlation between the existence of career mentors and the entrepreneurial intentions of individuals (Nabi, Walmsley, & Akhtar, 2019). Mentees tend to benefit by obtaining and refining their respective business ideas from mentors as well as gaining necessary knowledge to spur on their entrepreneurial intention (Nabi, Holden, & Walmsley, 2009). Mentorship in entrepreneurship also enhances the mentees self-efficacy and desire to start and succeed in creating a new business (St-Jean & Audet, 2012). This study confirms this theory, as future CA's believed that career mentors and having someone to look up to was important to them in developing an interest to start a new business.

Factor 5: Role Models

The fifth and penultimate strongest factor found to influence the entrepreneurial intent of future CA's is the role models factor. The questions that loaded into this factor (questions 14, 16 and 17) related to the role models antecedent previously found to influence entrepreneurial intent. The factor explains 5.157% of variation in the responses of future CA's. Overall, the results show that role models are important in shaping the entrepreneurial intentions of future CA's.

The mean score is 3.00 for the Role Models factor. The mean score of the factor illustrates that surveyed future CA's somewhat agreed they had someone who they were aspiring to become and who advised them. The mean score also shows that future CA's somewhat agreed that someone was present in their lives to share general strategies and advise them on career choices they make.

Furthermore, hypothesis 4 (from section 2) had stated that the presence of role models has a significant influence on the entrepreneurial intent of future CA's. The study accepts this hypothesis as being true, due to the role models emerging as significant factor from the factor analysis.

It is common that people state that they chose a career because they were influenced by others (Abbasianchavari & Moritz, 2020). Observing role models often empowers individuals to learn skills. Heckert et al. (2002) further argue that role models may also influence a person

to make career decisions. From the study one can see that future CA's in the study were largely influenced in the career path by role models. Linking their responses to factor 2, future CA's had high self-efficacy as measured by perceived feasibility. Liu, Ma, and Li (2019) state that role models will often increase the self-efficacy of individuals.

The link found between role models and entrepreneurial intentions is not an uncommon phenomenon (Van Auken et al., 2006). The results of this study supports prior studies that show that role models are important in shaping entrepreneurial intent (Bosma et al., 2012; Du Toit & Muofhe, 2011; Nowiński & Haddoud, 2019). The analysis shows that the presence of entrepreneurial role models is critical if future CA's are to be encouraged to start a new business.

Factor 6: Community Support

The last significant factor found to influence the entrepreneurial intent of future CA's is the community support factor. The questions that loaded into this factor (question 20, 21, 22 and 25) all relate to the community support antecedent found in the literature to influence entrepreneurial intentions. The factor explains around 3.966% of the variation in the responses given future CA's in the survey. These results show that degree of perceived support from the community influences the decision to want to start a new business.

The mean scores of the questions that loaded for factor 6 (questions 20,21,22 and 25) on average equalled 4.165. The mean score of the factor illustrates that surveyed future CA's were largely neutral on the degree to which they believe their communities provide support to budding entrepreneurs.

Furthermore, hypothesis 5 (from section 2) had stated that that community support has a significant influence on the entrepreneurial intent of future CA's. The study accepts this hypothesis as being true, due to community support emerging as significant factor from the factor analysis.

Prior studies largely find a correlation between community support and entrepreneurial intentions (Tas et al., 2012). This study is consistent with these studies given its emergence as a factor in the analysis. The results show that it is important that future CA's be given the necessary support by their communities if they are to be encouraged to start businesses.

4.2.2 Hypothesis Analysis

In section 2 of the report, various hypothesis were outlined. In total, 6 Hypothesis were stated. It was expected that locus of control, need for achievement, family support, presence of role

models, community support and economic factors would have a significant impact on the entrepreneurial intent of future CA's. The factor analysis, however, showed that only locus of control, family support, presence of role models and community support had a significant impact on the entrepreneurial impact. Need for achievement and economic factors did not emerge a significant factor influencing the entrepreneurial intent of future CA's.

Various reasons could explain why need for achievement and economic factors were not found to be significant determinants of a future CA's entrepreneurial intent. Firstly, need for achievement relates to a person desire to complete a certain outcome and be better(Lam et al., 2017). Most of the surveyed future CA's, in question 1 of the survey, had indicated that they had not started a business before. This could explain why they did not see a need to achieve and aspire to create a business. In the view Wu and Dagher (2007) need for achievement can only truly be present if an individual persists with an action despite the circumstances present in their lives. Future CA's are likely consumed by the current work and school related pressures. The fact that only a few future CA's have started businesses, could be attributed to their programmes being demanding and time consuming. Future CA's in the study displayed an inability to persist with entrepreneurial action (in the presence of school and work pressure) which explains why need for achievement was not a strong factor among them.

The economic factor was measured by question 48 of the study that asked respondents to indicate what background they grew up in, whether rural or urban. By the study showing that this factor is not significant, it is consistent with other studies that reject the idea that demographics and economic state can influence a person's entrepreneurial intent (Fayolle, Gailly, & Lassas-Clerc, 2006; Robinson, Stimpson, Huefner, & Hunt, 1991). The argument is that demographic related models (focused on background of an individual's and economic state) tend to provide limited justification on why individuals decide to become entrepreneurs (Izquierdo & Buelens, 2011). This is because such models proceed to explain behaviour without considering an individual's own unique subjective norm and perceived behavioural control (feasibility), that has been found to explain intent by a larger percentage than demographics (Ajzen, 1985; Gartner, 1989; Shapero & Sokol, 1982; Souitaris, Zerbinati, & Al-Laham, 2007).

Lastly, given that locus of control is significant factor that loaded, it is not a surprising why economic factor did not load as a significant factor. An inverse relationship naturally exists between these variables (Martončik, 2019). Locus of control is the belief that one has control over the events that occur in their lives. Individuals with high locus of control would inherently take responsibility for the outcome of their actions despite the presence of external factors. In

our study, future CA believed that if they worked hard and applied themselves, they would achieve all their academic and professional goals. They rejected the notion that they could not control their academic and professional success. This would explain why future CA's did not believe were they came from influenced their entrepreneurial intent.

4.3 T- Tests

Given the results obtained in section 4.2 and the differences in mean scores between future CA groups, it was decided to do two tailed t - tests. The purpose of the t-tests was to see if the differences between the responses of future CA groups were statistically significant. The variables tested were place of practice, gender and level of study. Only these three variables were tested using t-tests given that it was possible to identify two groups to be tested (Hsu & Lachenbruch, 2007; Soliman, 2011). Furthermore, there is precedent linking gender, place of practice and level of study to entrepreneurial intent (Engle, Schlaegel, & Delanoe, 2011; Li, Wu, & Wu, 2008). The objective of conducting the t-test was therefore to determine whether place of practice, gender or level of training of future CA had a significant impact on entrepreneurial intention. The t - tests were conducted on the 6 factors that loaded on the factor analysis in section 4.2. The results of this analysis can be found in Appendix G. Only the factors that showed significant differences among the CA groups are discussed in this section

Importantly, the major assumption for all the t tests was that samples have equal variances. That is, t – tests assuming equal variances were conducted. The general rule is that differences in variances within the sample should not be more than twice the variance of the other in order to assume equal variances. In all the variances shown in Appendix G, none of the samples had differences that exceeded twice the size of the other.

4.3.1 Perceived venture desirability and feasibility

The first antecedent found to be significant within the future CA groups was perceived new venture desirability and feasibility. A significant difference was found in relation to gender. Table 8 summarises the mean scores of the questions that loaded for the factor that related to perceived new venture desirability and feasibility. The table also shows the respective variances of the scores for the two groups (male and female) as well as the results of the t - Test conducted.

t-Test: Two-Sample Assuming Equal Variances, Gender: Table 8

	Male	*Female*
Mean	1.9105	2.25
Variance	0.8599	1.4026
Observations	81	137
Pooled Variance	1.2016	
Hypothesized Mean Difference	0	
Df	216	
t Stat	-2.2098	
P(T<=t) one-tail	0.0141	
t Critical one-tail	1.6519	
P(T<=t) two-tail	0.0282	
t Critical two-tail	1.971007472	

The P(T<=t) two-tail value for gender is 0.0282 with respect to perceived desirability and feasibility. This value is lower than 0.05, indicating that the null hypothesis (gender does not impact perceived desirability and feasibility) is rejected. The results thus show that the differences in responses between future CA's who are male and those that are female are statistically significant.

From the mean scores illustrated in Table 8, both male and female future CA's had scores closer to 2. This means that both male and female future CA's agreed that the act of starting a business was both desirable and feasible. Male future CA's, however, had a lower mean score than female future CA's. Since male future CA's had on average a lower mean score than female future CA's, it means that they perceived the desirability and feasibility of starting a new business more favourably than their female counterparts.

Precedent exists from previous studies finding that male respondents find the act of starting a new business to be more desirable and feasible than female respondents. Ward, Hernández-Sánchez and Sánchez-García (2019) and Vamvaka, Stoforos, Palaskas, and Botsaris (2020) in their collective studies, found that male students had higher perceived behavioural control (that relates to perceived desirability and feasibility) than female students. This means that males were found to have higher perceived desirability and feasibility to start a business than females. Males and females, however, were both found to have a positive outlook on entrepreneurship. This finding is consistent with this study that noted that both males and females had a positive outlook perceived venture desirability and feasibility.

To understand why this study and previous studies find that males have a higher desirability and feasibility outlook on the act of starting a business than females, the reason from prior literature must be evaluated. The first reason can be obtained from the person fit theory

developed by Caplan (1987). The theory states that individuals are drawn to career choices primarily through their individual personal traits. It is argued that males tend to have stronger attitudinal traits that draw them towards entrepreneurship and believe strongly that they will be successful at being entrepreneurs compared to females (Zhao, Seibert, & Lumpkin, 2010). Using this logic, the low score of male future CA's could be attributed to the respondents believing more strongly that their individual's traits best fit those of an entrepreneur than their female counterparts.

The second reason for the difference relates to societal perceptions. Sarfaraz, Faghih, and Majd (2014) argue that societal perceptions on the act of entrepreneurship influence the perceived desirability and feasibility of individuals deciding to start a new business. Marlow and Patton (2005) further argue that these societal perceptions may create self-imposed limitations on individuals (particularly females) on their own belief that they can become successful entrepreneurs. Society often paint a picture of males being individuals that can start businesses well and neglect that females can do it too. It is these self-imposed limitations (fostered by society) that may explain why females would often feel less strongly about their ability to start a business than their male counterparts (Balachandra, Briggs, Eddleston, & Brush, 2019). From a future CA perspective, it can be argued that one of the possible reasons why females felt less strongly than males about entrepreneurship being desirable and feasible is because of societal perceptions that may have impacted some female respondents to answer the questions adversely.

Lastly, Nicholson, Soane, Fenton-O'Creevy, and Willman (2005) argue that risk taking tolerance has a pivotal impact on an individual's decision to pursue entrepreneurship as a career path. They further argue that males tend to show higher levels of risk tolerance than females. This therefore explains why females in some instances may not feel strongly about the desirability and feasibility of pursuing entrepreneurship as a career option. Given this phenomenon it highly plausible that male future CA's in the study displayed higher risk tolerance capabilities than females which resulted in them recording a lower mean score than females.

4.3.2 Locus of Control

The second antecedent found to have significant differences within the future CA groups was locus of control. Table 9 summarises the mean scores for questions that loaded for the factor in relation to level of study. The table also shows the respective variances of the scores for the two groups (4th year students and Trainees in Practice) as well as the results of the t -test conducted.

t-Test: Two-Sample Assuming Equal Variances, Level of Study: Table 9

	4th year student	*Trainees in Practice*
Mean	5.7994	5.4159
Variance	1.1480	1.8393
Observations	113	105
Pooled Variance	1.4808	
Hypothesized Mean Difference	0	
Df	216	
t Stat	2.3253	
P(T<=t) one-tail	0.0105	
t Critical one-tail	1.6519	
P(T<=t) two-tail	0.0210	
t Critical two-tail	1.9710	

The P(T<=t) two-tail value is 0.0210 with respect to locus of control. This value is lower than 0.05, indicating that the null hypothesis (level of study does not impact locus of control) is rejected. The results thus show that the differences in responses between future CA's who are 4th year Students and those that are training in practice are statistically significant.

According to Findley and Cooper (1983), the degree of academic achievement and locus of control a person has are positively correlated . That is, the more qualified individuals are the more they believe they have control over events that occur in their lives. 4th year students and trainees in practice are highly qualified possessing at the very least Bachelor of Accounting Degrees. This would explain why both groups scored highly on locus of control. Trainees in practice, however, had a lower mean score for locus of control compared to 4th year students. This means that trainees in practice had higher levels of locus of control compared to 4th year students. One possible reason for this could be that these trainees in practice typically have honours equivalent qualifications and have passed some if not all of the professional exams. Trainees in practice are thus more qualified than fourth year students and would be more certain about the control they exert particularly professionally in starting a new business.

Wood, Saylor, and Cohen (2009) finds similar conclusion to that found by Findley and Cooper (1983). In addition, Mohamed, Mohammed, and Ahmed (2018) finds the introduction of a training programme in a group of university students increased their locus of control compared to those that did not have a training programme. That is, students that participated in training programmes were much more certain about their abilities to be successful (exhibited by a higher locus) than those did not participate in the programme. 4th year students have not yet participated in on the job training programme prescribed by SAICA were in contrast trainees in practice have. The non-participation of 4th year students in the training programme may

have resulted in them being less certain about the ability to control the events in their lives professionally as they are not certain what corporate has installed. This could explain why the mean scores of 4th year students mean were higher than trainees in practice.

Brockhaus (1982) further argues an essential ingredient of high locus of control is the ability to carry on through adversity. An example is made by Brockhaus (1982) of entrepreneurs that continue running a business for 13 years without having success to finally succeed in the end. These entrepreneurs typically show high locus of control as their persistence is a result of them believing that their actions can change the environment and become successful. This could explain why trainees in practice display higher levels of locus of control compared to 4th year students. Trainees in practice will have typically gone through a rigorous university academic programme and sat for professional exams. This academic journey is arguably a difficult one that would have required a level of resilience to be successful. It is this slightly greater resilience displayed by trainees in practice that would explain why they have higher locus of control than 4th year students.

Lastly, Karabulut (2016) argues there is a positive relationship between working in conditions of ambiguity and locus of control. That is, individuals who work in conditions of ambiguity on a regular basis will tend to display high levels of locus of control. 4th year students are exposed to ambiguity from a theoretical perspective through their studying different accounting subjects. On the other hand, trainees in practice not only get exposed to ambiguity from a theoretical perspective, but they also get exposed to different industries and clients that challenge their thinking continually. The exposure to ambiguity in work is far greater on trainees in practice then it is to 4th year students. It is this heightened exposure to ambiguity in the workplace that explains why trainees in practice, have higher levels of locus of control compared to 4th year students.

4.3.3 Role Models

The Third antecedent found to have significant differences within the future CA groups was Role Model. Table 10 summarises the mean scores for questions that loaded for the factor in relation Role Models. The table also shows the respective variances of the scores for the two group (TIPP and TOPP) as well as the results of the t -Test conducted.

t-Test: Two-Sample Assuming Equal Variances, Place of Practice: Table 10

	TIPP	*TOPP*
Mean	3.4167	2.4545
Variance	2.4092	1.7001
Observations	72	33
Pooled Variance	2.1889	
Hypothesized Mean Difference	0	
Df	103	
t Stat	3.0934	
P(T<=t) one-tail	0.0013	
t Critical one-tail	1.6597	
P(T<=t) two-tail	0.0025	
t Critical two-tail	1.9833	

The P(T<=t) two-tail value for is 0.0025 with respect to the Role Models antecedent. This value is lower than 0.05, indicating that the null hypothesis (Place of practice does not impact entrepreneurial intent) is rejected. The results thus show that the differences in responses between future CA's who are TIPP and those that are TOPP are statistically significant.

Future CA's TIPP usually work for firms of registered auditors while those future CA's TOPP work for banks, consulting and other SAICA accredited training offices. A registered SAICA training office is a firm that is authorized to provide article training to future CA's. The results show that trainees TOPP had a lower mean score in relation to Role Models than those TIPP. The questions in the survey were structured that the lower the score, the higher the degree of affirmation to the questions. The lower mean score recorded for TOPP shows that these trainees had stronger influence of role models in their career choice than those TIPP.

Lockwood, Sadler, Fyman, and Tuck (2004) argue that having someone to share career advice has a positive impact on the entrepreneurial career choice. They further argue that this is heightened by individuals who are risky. TOPP by nature is a riskier career choice for future CA. This is because TOPP usually focuses on specific industries to which the trainee is training, while TIPP offers a wide array of options and industries for trainees. TOPP trainees therefore have a higher risk tolerance compared to those TIPP. This would explain why trainees in TOPP have a lower score for Role Models antecedent than those TIPP.

Another possible reason for the difference scores could be the different entry requirements between trainees TIPP and those TOPP. TOPP interviews tend to be more rigorous and competitive than TIPP interviews. The amount of spaces in the training programmes associated with TOPP are very few compared to TIPP. These factors all make it difficult to be trainee TOPP. Prospective students would need all tools at their disposal to enter these

programmes including having role models to advise and shape them into candidates that can be successful at the interviews. This could be one of the reasons why TOPP trainees indicated having large impact of role models compared to trainees TIPP.

4.4 Responses in relation to propensity to act, perceived desirability and feasibility in starting a business.

In the literature it was noted that Krueger and Brazeal (1994) created an entrepreneurial intent model to predict future entrepreneurial behaviour. This model combined the principles related to perceived desirability, feasibility and propensity to act introduced by Ajzen (1985) and Shapero and Sokol (1982). In addition, perceived desirability and feasibility loaded as a significant factor found to influence the entrepreneurial intent of future CA's. As result of these circumstances, it was decided to analyse question 1 – 10 of the questionnaires in Appendix A, to determine whether future CA's perceived starting a business as both desirable and feasible. The analysis also looks at the propensity to act to start a business.

4.1.1 Propensity to act

In the very first question of the survey, respondents were asked to indicate whether they had started a business before. This question was asked to assess the respondents propensity to act as described by Ajzen (1985) and Krueger and Brazeal (1994). Only 13.8% of the surveyed future CA's indicated that they had started a business before. In contrast, when asked whether they would like to start a business at some point in the future, an overwhelming 85.3% of the future CA's had indicated 'yes'. These results show that future CA's do have a propensity to Act and start a business, although only a few have taken the step of starting a business.

One possible reason for the low number of future CA's who have started a business could be the fact that the majority of the respondents (51.8%), are still in a university setting studying. University students often focus on their studies and may find creating a business to be strenuous and time consuming. Moreover, starting a business involves taking a risk to start. This risk-taking often conflicts with what future CA's are taught in school, which is to be risk averse and manage risk.

Actual business started before (propensity to act): Table 11

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	30	13.8	13.8	13.8
	No	188	86.2	86.2	100.0
	Total	218	100.0	100.0	

Intention to start a new business (Propensity to act): Table 12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	186	85.3	85.3	85.3
	No	32	14.7	14.7	100.0
	Total	218	100.0	100.0	

4.5 Responses in relation to perceived feasibility, in starting a new business

Questions 3 - 7 of the survey were aimed at assessing whether future CA's perceived the act of starting a new business to be feasible. For example, question 3 asked the respondents to rate from a scale of 1 – 7 how difficult they think it is to start a business. The response to the question can be found in table 8 below. Over 67.4% of the surveyed future CA's indicated that they believed starting a business was very hard, hard or somewhat hard. This could possibly explain why the future CA's want to start a business, but they have not done so before.

Q3. Difficulty of starting a new business: Table 13

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very hard	50	22.9	22.9	22.9
	Hard	50	22.9	22.9	45.9
	Somewhat hard	47	21.6	21.6	67.4
	Neither easy nor hard	37	17.0	17.0	84.4
	Somewhat easy	17	7.8	7.8	92.2
	Easy	5	2.3	2.3	94.5
	Very easy	12	5.5	5.5	100.0
	Total	218	100.0	100.0	

The surveyed future CA's were also asked (in question 4 of the survey) to select the degree to which they believed their attempts to start a new business and ventures created would be successful. Results are displayed in table 14 below. The majority of the future CA's (56.4%) indicated that they believed their entrepreneurial endeavours would either be very certain of success, certain of success or somewhat certain of success.

Q4. Certainty of new venture success: Table 14

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very certain of success	35	16.1	16.1	16.1
	Certain of success	38	17.4	17.4	33.5
	Somewhat successful	50	22.9	22.9	56.4
	Neutral	54	24.8	24.8	81.2
	Somewhat certain of failure	28	12.8	12.8	94.0
	Certain of failure	6	2.8	2.8	96.8
	Very certain of failure	7	3.2	3.2	100.0
	Total	218	100.0	100.0	

When asked how overworked they think they would be if they were to start a business (question 5), 39.9% of the surveyed future CA's indicated they would be very overworked. Around 23.4% and 16.5 % of the future CA's indicated that they would either be overworked or somewhat overworked if they were to start a new business. This means that only 20% of the respondents believe that they won't be overworked by starting a business. This information shows that future CA's overwhelmingly believe that starting a business would overwork them, showing that they don't believe it to be feasible to start a new business.

Q5. Degree to which you are overworked in starting a business: Table 15

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very overworked	87	39.9	39.9	39.9
	Overworked	51	23.4	23.4	63.3
	Somewhat overworked	36	16.5	16.5	79.8
	Neutral	18	8.3	8.3	88.1
	Somewhat not overworked	13	6.0	6.0	94.0
	Not overworked	8	3.7	3.7	97.7
	Not overworked at all	5	2.3	2.3	100.0
	Total	218	100.0	100.0	

In relation to the question on how much they know with respect to starting a business (question 6), only 3.2% of the surveyed future CA's indicated that they know everything. About 11.5% and 27.1% of the respondents indicated that they either knew how to start a business or new something about starting a business. Only 47.3% of the respondents did not definitively state that they knew something about starting a business, with 20.2% of this group stating that they did not know enough about starting a business. These results show that the majority of future CA's believe they know enough to be able to start a business.

Q6. Knowledge about starting a new business: Table 16

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Know everything	7	3.2	3.2	3.2
	Know	25	11.5	11.5	14.7
	Know something	59	27.1	27.1	41.7
	Neutral	59	27.1	27.1	68.8
	Not enough	44	20.2	20.2	89.0
	Nearly nothing	11	5.0	5.0	94.0
	Know nothing	13	6.0	6.0	100.0
	Total	218	100.0	100.0	

Lastly, future CA's surveyed were asked to indicate the degree to which they would be successful entrepreneurs if they were to start a new business. The responses to this question (number 7) can be seen in Table 17 below. Over 25.2% of the future CA's stated that they were very sure that they would make successful entrepreneurs. About 22.9% and 19.7% of all the respondents indicated that they were sure and somewhat sure that they would make successful entrepreneurs. This means that the majority of the future CA's surveyed (around 68%) were at least somewhat sure that they would make successful entrepreneurs.

Q7. Expected entrepreneurial success: Table 17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very sure of myself	55	25.2	25.2	25.2
	Sure	50	22.9	22.9	48.2
	Somewhat sure	43	19.7	19.7	67.9
	Neutral	29	13.3	13.3	81.2
	Somewhat unsure	21	9.6	9.6	90.8
	Unsure	9	4.1	4.1	95.0
	Very unsure of myself	11	5.0	5.0	100.0
	Total	218	100.0	100.0	

The descriptive statistics above in the section show that future CAs mostly perceive that it is feasible for them to start a new venture. The surveyed future CA's appeared to indicate that it was not feasible from a resource and time point of view to become an entrepreneur. This unfavourable outlook stems from that fact that most the respondents indicated that they would be overworked and would find it difficult to start a new business. The other 5 variables however had a favourable outlook with respect to the feasibility antecedent. This is because future CA's

largely believe that they are competent to start business and that they would be successful if they were to embark on this career path.

4.6 Responses in relation to perceived desirability, in starting a new business.

Question 8 – 10 of the survey were included to assess the entrepreneurial intent of future CA's with respect to the desirability antecedent introduced by Ajzen (1985), Shapero and Sokol (1982) and Krueger and Brazeal (1994) . This section outlines the results obtained with respect to this antecedent.

Question 8 asked future CA's to state whether they would love starting a business. The results are displayed in Table 18 below. 54.6% of the of the respondents indicated that they would love starting a business. Around 16.5% and 8.3% of the respondents respectively indicated that they would either like or somewhat like the idea of starting a new business. Only a few (5%) stated that they would hate starting a new business. The results show that the majority of future CA's (about 79%) would at least somewhat like the idea of starting a new business.

Q8. Degree to which new venture creation is loved: Table 18

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I would love doing it	119	54.6	54.6	54.6
	I would like doing it	36	16.5	16.5	71.1
	Somewhat	18	8.3	8.3	79.4
	Neutral	16	7.3	7.3	86.7
	Somewhat	15	6.9	6.9	93.6
	Would not like doing it	3	1.4	1.4	95.0
	I would hate doing it	11	5.0	5.0	100.0
	Total	218	100.0	100.0	

When asked how tense starting a new business would make the future CA (question 9), 24.8% believed that it would them very tense. 24.3% of the respondents said that starting a business would make them tense. 21.6% of the respondents indicated that starting a business somewhat tense. This means that a large majority of the future CA's surveyed (70.7%) had stated that they would be at least tense if they were to start a new business. Only a minority of the respondents (29.3%) had indicated that they would not be at least tense if they were to start a business. The table below illustrates the breakdown of the responses.

Q9. Degree to which new venture creation makes one tense: Table 19

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very tense	54	24.8	24.8	24.8
	Tense	53	24.3	24.3	49.1
	Somewhat tense	47	21.6	21.6	70.6
	Neutral	29	13.3	13.3	83.9
	Somewhat at ease	19	8.7	8.7	92.7
	At ease	8	3.7	3.7	96.3
	Not tense at all	8	3.7	3.7	100.0
	Total	218	100.0	100.0	

Lastly, the future CA were asked to express the degree to which they believe they would be enthused if they were to start a new business. Over 45.4% of the respondents believed that they would be very enthused if they were to start a new business. 23.4% of the respondents indicated that they would be enthused if they were to start a new business. 17% of the future CA's stated that they would be somewhat enthused if they were to start a new business. Only 3.7%. 3.2%, 1.8% and 5.5% of the respondents believed that they would be neutral, somewhat unenthusiastic, unenthusiastic and very unenthusiastic about starting a new business. The results show that an overwhelming number of future CA's surveyed (85.8%) would at least be somewhat enthused if they were start a new business.

Q10. Degree of enthusiasm derived from new venture creation: Table 20

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very enthused	99	45.4	45.4	45.4
	Enthused	51	23.4	23.4	68.8
	Somewhat enthused	37	17.0	17.0	85.8
	Neutral	8	3.7	3.7	89.4
	Somewhat unenthusiastic	7	3.2	3.2	92.7
	Unenthusiastic	4	1.8	1.8	94.5
	Very unenthusiastic	12	5.5	5.5	100.0
	Total	218	100.0	100.0	

Analysing the results relating to new venture desirability, the majority of the future CA's surveyed believed it was desirable for them to start a new business. This is because when asked whether they would either love or be enthused about starting a new business, the future CA's responded strongly to affirm this in large number. The question about how tense show however that most future CA's believe they would be tense if they were to start a business

going against the desirability responses in the other two questions. The response of the future CA's about being tense if they start a new business is a natural response given the difficult nature of being an entrepreneur (Bruder, 2013). The response in relation to tenseness is also consistent with the responses given by future CA's in the previous section that they would be overworked and not have the natural resources including time to start a new business.

4.7 Summary of results

The initial analysis tool used to analyse the results of the questionnaire was descriptive statistics. The data showed that the majority of the surveyed future CA's consisted of 4th year students followed by 1st year trainees, 2nd year trainees and finally 3rd year trainees.

Exploratory factor analysis was then conducted to determine the factors that influence the entrepreneurial intent of future CA's. Six factors were identified as strong influences on a future CA's entrepreneurial intent namely, family support, perceived desirability and feasibility, career mentors, role models, locus of control and community support

A further analysis of the results was done to see if the factors that loaded in the factor analysis differed among the different groups of future CA's. Significant differences were found for perceived desirability and feasibility, role models and the locus of control factor. Gender influenced the entrepreneurial intent of future CA's relating to perceived desirability and feasibility to start a firm. Level of study was seen to influence entrepreneurial intent with respect to locus of control. Lastly, place of practice was found to influence the entrepreneurial intent of future CA's with respect to the role models factor.

Given that perceived desirability and feasibly was identified as significant antecedent to predict behaviour in the literature, it was decided to further analyse Q1 to Q10 using descriptive statistics. The results showed that future CA's believe that starting a new business is both desirable and feasible.

Chapter 5: Recommendations and Conclusion

The objective of the research was to assess the entrepreneurial intent of future CA's in a South African context. Research findings revealed that future CA's do have an entrepreneurial intent. This was largely seen through the high mean scores recorded on the questionnaire when asked about their entrepreneurial intentions. The study also explained the link between intentions and behaviour. The starting point for people to start a business is to first have an intent. Given the importance of entrepreneurship to economies and the entrepreneurial intent of future CA's, it is important that a cultivation process occurs so that those wishing to start a business ultimately do so. The following section provides recommendations on initiatives and programmes that could be implemented to encourage entrepreneurial activity among future CA's.

5.1 Recommendations

Perceived family support was determined to be the biggest factor influencing the entrepreneurial intent of future CA's. This means that any programme or initiative designed to encourage entrepreneurial activity among future CA's should focus on improving perceived family support first.

Edelman, Manolova, Shirokova, and Tsukanova (2016) in their study, find a positive relationship between family social capital and entrepreneurial start- up activity. This means families need to be encouraged to provide emotional support to their children to raise the probability of those children opting to become entrepreneurs.

The second and third factors influencing entrepreneurial activity were career mentors and role models. The study highlights the importance of educators and professional bodies like SAICA to introduce future CA's to entrepreneurial role models and mentors should they which to encourage entrepreneurial activity among them.

Nowiński and Haddoud (2019) find that in addition to exposing students or individuals to role models, educators need to reinforce self-efficacy principles to increase the likelihood of the intent leading to action. For example, if educators decide to introduce guest speakers who are successful entrepreneurs to inspire students, they need to ensure that such speakers share technical knowledge and practical skills to the students to enhance their self- efficacy or perceived feasibility to start a business. Inspiration from role models without delivering content to improve the student's entrepreneurial skills is unlikely to enhance their intent to start a new business (Thrane, Blenker, Korsgaard, & Neergaard, 2016).

Furthermore, Self-efficacy is best enhanced by social comparison (Laviolette, Radu Lefebvre, & Brunel, 2012). It is only when students can identify themselves with the role models that they are more likely to be inspired to follow in their path and also become entrepreneurs (Bosma et al., 2012; Laviolette et al., 2012; Thrane et al., 2016). This means that educators or professional bodies have to be weary on who they select to inspire students as entrepreneurial role models. The role models chosen, have to be relatable to the students as far as possible to enhance their entrepreneurial intent and action.

From a career mentor perspective, many studies find that career mentorship may positively impact mentees including those wishing to pursue entrepreneurship as a career path (Allen, Eby, O'Brien, & Lentz, 2008; Ragins & Kram, 2007). Crisp and Cruz (2009) provide a comprehensive guide on how a mentorship programme should be structured for university students so that they can benefit. This framework may be useful for programmes intended to encourage entrepreneurial activity among future CA's. For example, there should be an initial training process for the mentor and mentee. Secondly the initial number of meetings should be set up between the mentor and mentee. Finally, a logbook should be kept by the mentee to record progress.

The fourth factor identified was community support. As mentioned in the prior sections, community support is a broad concept including both social capital and other various forms of support such as media attention and access to finance when an individual decides to become an entrepreneur. The study shows that emphasis needs to be put to support future CA's in their communities to encourage entrepreneurial activity. Mazzarol (2014) argues that to achieve this, governments and stakeholders alike must strive to create entrepreneurial ecosystems. One of the most famous entrepreneurial ecosystems in the world is Silicon Valley in the US (Engel, 2015). This means professional bodies like SAICA may look to foster the creation of entrepreneurial like environments for future CA's to encourage increased entrepreneurial activity.

To create an entrepreneurial ecosystem, 9 core elements should be present (Stam, 2015). These elements are government policy, regulatory reform, funding and finance structure, culture, mentors and advisors, universities, education and training, human capital and work force (Mazzarol, 2014). Of these 9 elements, professional bodies should at the very least look at fostering education and training to encourage enhanced entrepreneurial activity. As Peterman and Kennedy (2003) found in their study, entrepreneurial education programmes positively impact the entrepreneurial intent of students. Several other studies have also reached similar conclusions (Fayolle & Gailly, 2015; Raposo & Do Paço, 2011).

The last two factors are locus of control and perceived desirability and feasibility. These factors are linked to the personal traits of an individual. The study showed that a vast majority of the future CA's had a high perceived desirability and feasibility to start businesses already.

5.2 Conclusion

The purpose of this study was to evaluate the entrepreneurial intent of future CA's in South Africa. The study was conducted under the backdrop of poor macroeconomic conditions in South Africa. Entrepreneurship was thus identified as a tool to rectify these issues. Furthermore, Chartered Accountants were identified as being positioned appropriately with the necessary financial literacy and skills required to be successful entrepreneurs. Given these factors it was deemed necessary to evaluate the entrepreneurial intent of future CA's.

The study found that future CA's had a high degree of perceived desirability and feasibility to start a new business. In addition, the factor analysis identified 6 factors found to shape the entrepreneurial intent of future CA's in South Africa. The factors identified were desirability and feasibility, family support, locus of control, role models, career mentors and community support. It is noted that to encourage entrepreneurial activity among future CA's resources will need to be directed in addressing these key factors.

Further research is needed to directly ascertain how the actual CA curriculum may impact entrepreneurial intentions. This study did not directly evaluate the effect of the content taught to future CA's on their entrepreneurial intent. Research in the future would need to focus on this element in order to obtain more direct solutions to encourage entrepreneurial activity.

Furthermore, gender differences were note for perceived desirability and feasibility. Research in the future will need to focus on why gender would impact a future CA's perception on their ability to start a new business. In the study female future CA's were found to have lower perceived desirability and feasibility to start a new venture than male future CA's. The reason for the differences stemmed from societal perceptions, personal traits and risk tolerance. Research would need to test these factors (societal perception, personal traits and risk tolerance) and quantify their direct impact on entrepreneurial intent of both females and males. By understanding this in detail, programmes may be tailor made to encourage entrepreneurial activity with greater effect.

In addition, the place where future CA's are receiving their training (TIPP or TOPP) impacted the role models factor. The study found that future CA's TOPP had a high affinity and association with role models than those TIPP. Further research would be needed to understand why this is the case.

Finally, the study finds that the reliance on future CA's to drive the entrepreneurial agenda of South Africa is justified. This is because they not only possess the technical skills required but also the characteristics that would make them successful entrepreneurs. Whether the accounting profession itself will ultimately take on the initiative however remains to be seen.

6. Appendix

6.1 Appendix A: Questionnaire

Questions	Possible Responses
Propensity to act/serious intention	
Q1: Do you currently have a business of your own?	Yes/No
Q2: Do you intend to start a new business of your own someday?	Yes/No
Perceived Feasibility	
Q3: How hard do you think it is to start your own business?	Very Hard = 1; Very Easy = 7
Q4: If you were to start a business, how certain are you that it would succeed?	Very certain of success = 1; Very certain of failing = 7
Q5: If you were you start a business how overworked do you think you would be?	Very overworked = 1; Not overworked at all = 7
Q6: Would you say you know enough to start your own business?	Know everything = 1; Know nothing = 7
Q7: How sure are you of yourself, that you might be a successful entrepreneur if you started a new business?	Very sure of myself = 1; Very unsure of myself = 7
Perceived Desirability	
Q8: Would you say starting a new business is something you would love doing?	I would love doing it = 1; I would hate doing it = 7
Q9: If you were to start a new business, how tense do you think the experience would make you?	Very Tense = 1; Not tense at all = 7
Q10: If you were to start a new business, how enthusiastic would you be about the process?	Very Enthused = 1; Very unenthusiastic = 7
Need for Achievement	
Q11: I try to perform better than my peers	Strongly Agree = 1; Strongly disagree = 7
Q12: I do my best work when my assignments are fairly difficult.	Strongly Agree = 1; Strongly disagree = 7
Q13: I try very hard to improve on my past performance	Strongly Agree = 1; Strongly disagree = 7
Locus of Control, Community Support and Role Models	

Q14: There is someone I can count on to be there if I need support when I make career choices.	Strongly Agree = 1; Strongly disagree = 7
Q15: I am often blamed for things that are just not my fault	Strongly Agree = 1; Strongly disagree = 7
Q16: There is someone who helps me weigh the pros and cons of the career choices I make	Strongly Agree = 1; Strongly disagree = 7
Q17: There is someone who tells or shares general strategies for a successful life with me.	Strongly Agree = 1; Strongly disagree = 7
Q18: Most of the time my parents and loved ones listen to what I have to say.	Strongly Agree = 1; Strongly disagree = 7
Q19: I feel that when good things happen, they happen because of hard work.	Strongly Agree = 1; Strongly disagree = 7
Q:20 Banks and other investors go out of their way to help new businesses get started.	Strongly Agree = 1; Strongly disagree = 7
Q21: Young people are encouraged to be independent and start their own businesses.	Strongly Agree = 1; Strongly disagree = 7
Q22: State and local governments provide good support for those starting businesses.	Strongly Agree = 1; Strongly disagree = 7
Q23: Most leaders in the community I live in are business leaders.	Strongly Agree = 1; Strongly disagree = 7
Q24: I believe that planning ahead makes things turn out better.	Strongly Agree = 1; Strongly disagree = 7
Q25: The local media does a good job covering local businesspeople.	Strongly Agree = 1; Strongly disagree = 7
Q26: There is someone I am trying to be like in my career pursuits.	Strongly Agree = 1; Strongly disagree = 7
Q27: There is no one I am trying to be like in my career pursuits.	Strongly Agree = 1; Strongly disagree = 7
Q28: In the accounting career path I am pursuing, there is someone I admire.	Strongly Agree = 1; Strongly disagree = 7

Q29: There is no one particularly inspirational to me in the career path I am pursuing.	Strongly Agree = 1; Strongly disagree = 7
Q30: I feel that on the majority of the time, trying hard is futile as things never turn out they way you plan any way.	Strongly Agree = 1; Strongly disagree = 7
Q31: I usually feel that it is useless to try at school/work as most people there are just smarter than me	Strongly Agree = 1; Strongly disagree = 7
Q32: I believe that the best way to resolve problems I am encountered with in life is to simply ignore them.	Strongly Agree = 1; Strongly disagree = 7
Q33: I believe that doing my tutorials/ work assignments does not have an impact on my performance at work/school.	Strongly Agree = 1; Strongly disagree = 7
Q34: I avoid settings were people don't share the same values as me.	Strongly Agree = 1; Strongly disagree = 7
Q35: What we are used to is more favourable than what is unfamiliar	Strongly Agree = 1; Strongly disagree = 7
Family Support	
Q36: My parent(s) would feel positively about me deciding to start a new business.	Strongly Agree = 1; Strongly disagree = 7
Q:37 My close friends would feel positively about me deciding to start a new business.	Strongly Agree = 1; Strongly disagree = 7
Q:38 My co students/ colleagues would feel positively about me deciding to start my own business.	Strongly Agree = 1; Strongly disagree = 7
Q:39 My brother/ sisters would feel positively about me deciding to start my own business.	Strongly Agree = 1; Strongly disagree = 7
Q:40 My relatives would feel positively about me deciding to start a new business.	Strongly Agree = 1; Strongly disagree = 7
Q41: My neighbour would feel positively about me deciding to start a business.	
Q:42 In general, my acquittances would feel positively about me deciding to start a new business.	Strongly Agree = 1; Strongly disagree = 7
Entrepreneurial experience and background	

Q:43 Have any of your immediate family members (parents, siblings, cousins, grandparents, aunts and uncles) started a business before?	Yes/No
Q:44 Has anyone else you know (other than people mentioned above) started a business?	Yes/No
Q:45 Have you ever worked for a small or new business before?	Yes/No
Q:46 Have you ever started a business before?	Yes/No
Q:47 Would you say you grew up in a community that encourages one to pursue entrepreneurship as a career path?	Yes/No
Q48 What was the nature of the environment you grew up in?	1 = Highly Rural ; 7 = Highly Urban
Demographic and Training Questions	
Q:49 Please indicate your gender	Male/Female
Q:50 Please indicate the level of your training currently	1st year Trainee/ 2nd year Trainee/ 3rd year Trainee or 4th year student.
Q:51 If you are Trainee, are you working in public practice (TIPP) or outside public practise (TOPP)	0 = TIPP 1= TOPP

6.2 Appendix B: Coding Questionnaire

Propensity to Act	INTEND
Desirability	DESIRE
Feasibility	FEAS
Need for Achievement	ACHIEVE
Role Models	CONTROL ROLE
Locus of Control	CONTROL ROLE
Community Support	CONTROL ROLE
Family Support	FAM
Gender	DEM GENDER
Level of Training	DEM TRAIN
Place of practice (TIPP or TOPP)	DEM PP

Propensity to Act relates to question 2 in Appendix A. Desirability and feasibility relate to question 3 -10 i. Locus of control, need for achievement, role models, community support and family support relate to question 11 – 47. Gender, Level of training and place of practice relates to question 48, 49 and 50 respectively.

6.3 Appendix C: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Q1_INTEND	218	1	2	1.86	.345
Q2_INTEND	218	1	2	1.15	.355
Q3_FEAS	218	1	7	2.93	1.650
Q4_FEAS	218	1	7	3.22	1.517
Q5_FEAS	218	1	7	2.37	1.570
Q6_FEAS	218	1	7	3.89	1.398
Q7_FEAS	218	1	7	2.92	1.715
Q8_DESIRE	218	1	7	2.20	1.731
Q9_DESIRE	218	1	7	2.83	1.617
Q10_DESIRE	218	1	7	2.23	1.639
Q11_ACHIEVE	218	1	7	2.54	1.408
Q12_ACHIEVE	218	1	7	2.34	1.166
Q13_ACHIEVE	218	1	6	1.64	.838
Q14_CONTROL_ROLE	218	1	7	2.64	1.581
Q15_CONTROL_ROLE	218	1	7	4.37	1.513
Q16_CONTROL_ROLE	218	1	7	3.41	1.802
Q17_CONTROL_ROLE	218	1	7	2.96	1.796
Q18_CONTROL_ROLE	218	1	7	2.25	1.325
Q19_CONTROL_ROLE	218	1	7	2.28	1.357
Q20_CONTROL_ROLE	218	1	7	4.56	1.487
Q21_CONTROL_ROLE	218	1	7	3.49	1.768
Q22_CONTROL_ROLE	218	1	7	4.30	1.592
Q23_CONTROL_ROLE	218	1	7	4.47	1.569
Q24_CONTROL_ROLE	218	1	6	1.70	.826
Q25_CONTROL_ROLE	218	1	7	4.31	1.584
Q26_CONTROL_ROLE	218	1	7	3.29	1.909
Q27_CONTROL_ROLE	218	1	7	4.29	2.178
Q28_CONTROL_ROLE	218	1	7	3.12	1.805
Q29_CONTROL_ROLE	218	1	7	4.58	2.004
Q30_CONTROL_ROLE	218	1	7	5.04	1.736
Q31_CONTROL_ROLE	218	1	7	5.95	1.352
Q32_CONTROL_ROLE	218	1	7	6.01	1.432
Q33_CONTROL_ROLE	218	1	7	5.79	1.597
Q34_CONTROL_ROLE	218	1	7	3.41	1.792
Q35_CONTROL_ROLE	218	1	7	3.20	1.772
Q36_FAM	218	1	7	2.33	1.500
Q37_FAM	218	1	7	2.19	1.228
Q38_FAM	218	1	7	2.71	1.339

Q39_FAM	218	1	7	2.00	1.241
Q40_FAM	218	1	7	2.67	1.475
Q41_FAM	218	1	7	3.37	1.463
Q42_FAM	218	1	7	2.64	1.385
Q43_BACK	218	1	2	1.25	.435
Q44_BACK	218	1	2	1.12	.330
Q45_BACK	218	1	2	1.58	.495
Q46_BACK	218	1	2	1.72	.448
Q47_BACK	218	1	2	1.64	.482
Q48_BACK	218	1	7	3.22	1.698
Q49_DEM_GEN	218	1	2	1.63	.484
Q50_DEM_TRAIN	218	1	4	1.84	1.037
Q51_DEM_PP	218	1	3	2.10	.918
Q52_DEM_RACE	218	1	5	1.42	.934
Q53_DEM_AGE	218	1	4	1.28	.622
Valid N (listwise)	218				

6.4 Appendix D: Cronbach's Alpha values

	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q1_INTEND	313.019	.022	.489	.689
Q2_INTEND	311.558	.138	.540	.688
Q3_FEAS	316.221	-.094	.364	.701
Q4_FEAS	302.405	.165	.460	.685
Q5_FEAS	308.918	.037	.383	.693
Q6_FEAS	303.306	.167	.468	.685
Q7_FEAS	295.123	.260	.665	.679
Q8_DESIRE	298.319	.202	.642	.683
Q9_DESIRE	311.358	-.010	.323	.696
Q10_DESIRE	302.376	.146	.541	.686
Q11_ACHIEVE	300.387	.226	.298	.682
Q12_ACHIEVE	301.823	.252	.391	.681
Q13_ACHIEVE	309.088	.123	.379	.687
Q14_CONTROL_ROLE	289.383	.400	.600	.670
Q15_CONTROL_ROLE	305.729	.102	.245	.689
Q16_CONTROL_ROLE	287.645	.368	.593	.671
Q17_CONTROL_ROLE	289.008	.347	.551	.673
Q18_CONTROL_ROLE	296.745	.326	.466	.677
Q19_CONTROL_ROLE	301.511	.213	.401	.682
Q20_CONTROL_ROLE	292.745	.363	.433	.673
Q21_CONTROL_ROLE	292.094	.301	.479	.676
Q22_CONTROL_ROLE	291.919	.348	.576	.674
Q23_CONTROL_ROLE	295.753	.281	.506	.678
Q24_CONTROL_ROLE	307.206	.191	.414	.685
Q25_CONTROL_ROLE	295.231	.288	.469	.677
Q26_CONTROL_ROLE	297.259	.190	.807	.684
Q27_CONTROL_ROLE	328.321	-.249	.785	.719
Q28_CONTROL_ROLE	295.040	.244	.652	.680
Q29_CONTROL_ROLE	324.991	-.216	.681	.714
Q30_CONTROL_ROLE	318.169	-.126	.549	.704
Q31_CONTROL_ROLE	309.002	.054	.577	.691
Q32_CONTROL_ROLE	307.907	.069	.558	.690
Q33_CONTROL_ROLE	301.240	.173	.401	.684
Q34_CONTROL_ROLE	309.949	.004	.278	.696
Q35_CONTROL_ROLE	312.395	-.034	.316	.698
Q36_FAM	286.122	.493	.604	.666
Q37_FAM	288.341	.565	.676	.666
Q38_FAM	293.025	.406	.561	.672

Q39_FAM	294.143	.416	.590	.673
Q40_FAM	286.754	.490	.643	.666
Q41_FAM	289.156	.444	.526	.669
Q42_FAM	286.912	.524	.676	.665
Q43_BACK	314.090	-.057	.464	.691
Q44_BACK	312.020	.109	.349	.688
Q45_BACK	312.189	.056	.277	.689
Q46_BACK	312.392	.051	.545	.689
Q47_BACK	308.802	.258	.402	.685
Q48_BACK	311.560	-.017	.357	.697

6.5 Appendix E: Communalities

	Initial	Extraction
Q1_INTEND	.489	.408
Q2_INTEND	.540	.595
Q3_FEAS	.364	.402
Q4_FEAS	.460	.450
Q5_FEAS	.383	.422
Q6_FEAS	.468	.469
Q7_FEAS	.665	.777
Q8_DESIRE	.642	.759
Q9_DESIRE	.323	.380
Q10_DESIRE	.541	.538
Q11_ACHIEVE	.298	.256
Q12_ACHIEVE	.391	.494
Q13_ACHIEVE	.379	.421
Q14_CONTROL_ROLE	.600	.692
Q15_CONTROL_ROLE	.245	.192
Q16_CONTROL_ROLE	.593	.618
Q17_CONTROL_ROLE	.551	.640
Q18_CONTROL_ROLE	.466	.375
Q19_CONTROL_ROLE	.401	.405
Q20_CONTROL_ROLE	.433	.464
Q21_CONTROL_ROLE	.479	.455
Q22_CONTROL_ROLE	.576	.664
Q23_CONTROL_ROLE	.506	.631
Q24_CONTROL_ROLE	.414	.463
Q25_CONTROL_ROLE	.469	.487
Q26_CONTROL_ROLE	.807	.973
Q27_CONTROL_ROLE	.785	.754
Q28_CONTROL_ROLE	.652	.661
Q29_CONTROL_ROLE	.681	.753
Q30_CONTROL_ROLE	.549	.576
Q31_CONTROL_ROLE	.577	.601
Q32_CONTROL_ROLE	.558	.551
Q33_CONTROL_ROLE	.401	.372
Q34_CONTROL_ROLE	.278	.383
Q35_CONTROL_ROLE	.316	.394
Q36_FAM	.604	.648

Q37_FAM	.676	.693
Q38_FAM	.561	.579
Q39_FAM	.590	.571
Q40_FAM	.643	.672
Q41_FAM	.526	.497
Q42_FAM	.676	.711
Q43_BACK	.464	.582
Q44_BACK	.349	.384
Q45_BACK	.277	.193
Q46_BACK	.545	.959
Q47_BACK	.402	.380
Q48_BACK	.357	.433

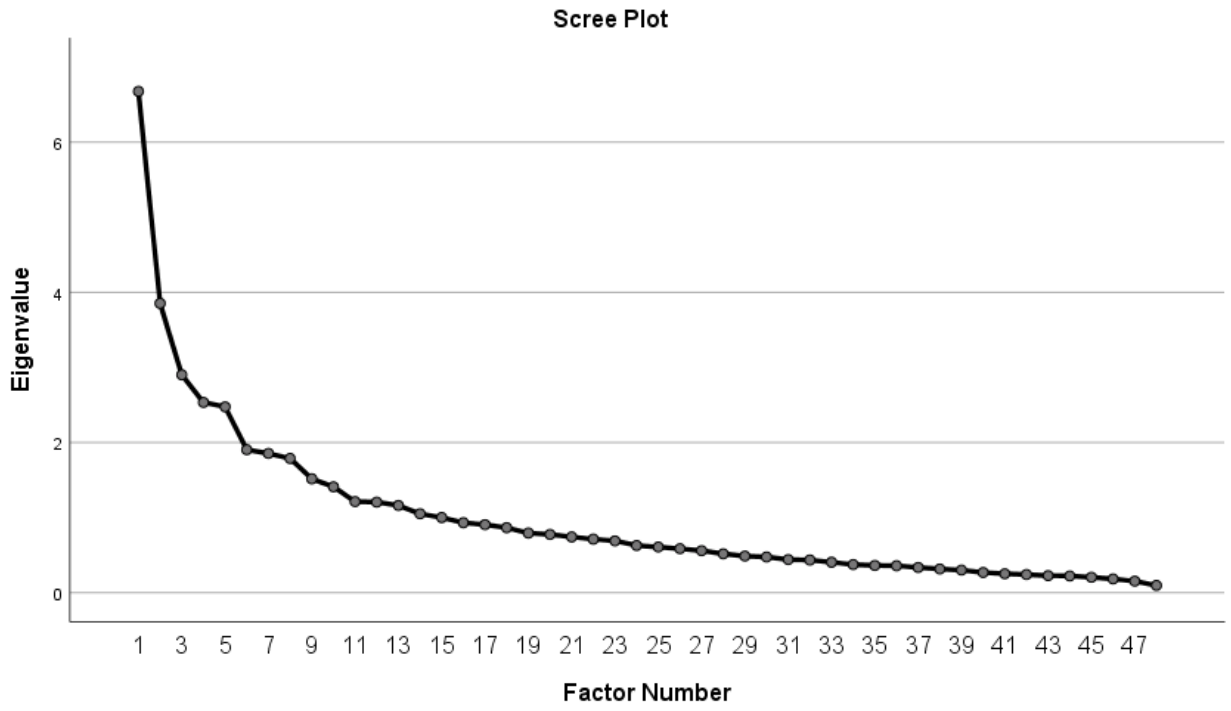
Extraction Method: Principal Axis Factoring.

6.6 Appendix F: Total variance Explained, Initial Factor Matrix and Rotated Factor Matrix

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.676	13.909	13.909	6.288	13.099	13.099	4.092	8.524	8.524
2	3.853	8.027	21.936	3.435	7.156	20.256	2.625	5.469	13.993
3	2.902	6.045	27.981	2.494	5.196	25.451	2.407	5.015	19.009
4	2.534	5.279	33.260	2.209	4.601	30.053	2.153	4.485	23.494
5	2.475	5.157	38.417	2.029	4.226	34.279	2.061	4.293	27.787
6	1.904	3.966	42.383	1.440	2.999	37.278	1.840	3.834	31.621
7	1.854	3.863	46.246	1.392	2.900	40.177	1.551	3.231	34.852
8	1.787	3.723	49.969	1.283	2.673	42.850	1.445	3.010	37.862
9	1.517	3.160	53.129	1.009	2.102	44.952	1.407	2.932	40.794
10	1.410	2.938	56.067	.961	2.002	46.954	1.399	2.914	43.708
11	1.213	2.527	58.594	.753	1.569	48.524	1.146	2.388	46.097
12	1.206	2.512	61.105	.734	1.528	50.052	1.126	2.347	48.443
13	1.162	2.421	63.527	.708	1.474	51.526	.877	1.828	50.271
14	1.050	2.188	65.715	.569	1.186	52.712	.877	1.827	52.098
15	1.000	2.084	67.799	.478	.995	53.707	.772	1.609	53.707
16	.932	1.941	69.740						
17	.906	1.888	71.628						
18	.865	1.803	73.431						
19	.794	1.655	75.086						
20	.776	1.617	76.702						
21	.742	1.546	78.248						
22	.713	1.485	79.733						
23	.690	1.437	81.170						
24	.628	1.309	82.479						
25	.608	1.266	83.745						
26	.585	1.219	84.965						
27	.559	1.165	86.129						
28	.517	1.078	87.207						
29	.487	1.015	88.222						
30	.475	.990	89.212						
31	.441	.919	90.131						
32	.435	.905	91.037						
33	.405	.845	91.881						
34	.374	.779	92.660						
35	.362	.755	93.415						
36	.359	.747	94.162						
37	.336	.699	94.861						
38	.316	.657	95.519						

39	.300	.625	96.144						
40	.269	.561	96.705						
41	.252	.525	97.230						
42	.242	.504	97.734						
43	.226	.472	98.206						
44	.223	.465	98.670						
45	.205	.428	99.098						
46	.183	.381	99.479						
47	.154	.321	99.800						
48	.096	.200	100.000						

Extraction Method: Principal Axis Factoring.



Rotated Factor Matrix

	Factor														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Q37_FAM	.758	.184	-.098	-.024	.136	.150	.000	.068	.019	.093	.102	-.010	.091	-.032	.004
Q42_FAM	.748	.156	-.028	.176	.147	.044	.073	.013	-.017	-.031	-.026	.080	-.030	-.194	-.142
Q40_FAM	.730	.028	-.055	.111	.106	.298	-.041	-.026	-.053	-.002	-.069	.048	-.090	.037	-.042
Q36_FAM	.703	.030	.035	-.013	.026	.166	.034	-.066	.223	.034	.106	-.048	.136	.177	.061
Q39_FAM	.679	.137	-.084	-.067	.080	-.067	.029	.025	.065	-.025	.083	.000	.219	.082	-.037
Q41_FAM	.623	-.052	.077	.113	.051	.129	-.033	.079	.007	-.042	-.096	.132	-.170	.021	-.050
Q38_FAM	.605	.092	-.040	.108	.146	-.022	-.035	.060	-.016	-.130	.093	.163	-.043	-.322	.081
Q8_DESIRE	.116	.840	-.085	.053	.007	-.008	.038	-.002	.111	.047	.081	-.076	-.016	.033	.011
Q10_DESIRE	.016	.696	-.087	-.055	.046	.012	.071	.047	-.018	.008	-.102	.062	.070	-.098	-.058
Q7_FEAS	.119	.629	-.161	.031	.088	.139	.091	-.045	-.003	-.090	.060	.205	.471	.130	-.107
Q2_INTEND	.215	.623	-.097	.025	-.119	-.168	.088	.071	.097	-.201	.103	-.083	-.161	.037	-.001
Q31_CONTROL_ROLE	.043	-.126	.718	-.002	-.106	.015	-.071	.002	-.189	.000	-.051	-.093	.053	.016	.044
Q32_CONTROL_ROLE	-.009	-.127	.684	-.017	-.009	.038	-.138	-.012	-.104	.009	.030	-.080	.012	-.132	.099
Q30_CONTROL_ROLE	-.151	-.097	.661	-.062	-.224	-.003	-.033	-.031	-.038	-.083	.014	-.170	-.052	.045	.098
Q33_CONTROL_ROLE	.047	-.090	.521	-.050	.093	.074	.081	.022	-.147	.050	-.023	.175	-.045	-.046	.085
Q15_CONTROL_ROLE	-.100	.088	.328	.075	-.011	.080	.015	-.029	.000	.064	-.015	.191	-.108	-.033	-.003

Q26_CONTROL_ROLE	.141	-.015	.092	.951	.112	.085	.030	.000	.052	-.035	.096	.063	-.005	-.036	.024
Q27_CONTROL_ROLE	-.086	-.020	.130	-.815	-.062	-.072	-.102	.008	.046	.002	-.181	-.066	-.024	.043	-.063
Q17_CONTROL_ROLE	.125	.041	-.054	.098	.760	.076	.072	.086	.005	.005	.073	.042	-.053	.055	-.023
Q16_CONTROL_ROLE	.196	.036	-.136	.097	.700	.040	.001	.164	.003	-.026	.010	.157	-.074	.026	.019
Q14_CONTROL_ROLE	.224	-.100	.002	-.027	.689	-.045	.066	.127	.316	-.023	.033	-.006	.171	-.034	-.025
Q18_CONTROL_ROLE	.296	-.018	-.046	.069	.319	.099	.016	-.203	.304	-.072	.057	.003	.091	.132	.000
Q22_CONTROL_ROLE	.282	.037	.081	.018	-.016	.609	-.094	.162	.073	-.229	.090	-.272	.104	-.103	.092
Q20_CONTROL_ROLE	.207	-.018	.074	.108	.019	.605	.016	.080	-.026	-.007	-.009	.115	.003	.132	.005
Q25_CONTROL_ROLE	.008	.009	.185	.147	.133	.543	-.006	.129	.177	-.090	-.067	-.016	-.079	-.131	-.186
Q21_CONTROL_ROLE	.301	-.066	-.086	-.059	.012	.534	.037	.149	.043	-.054	.148	-.006	.008	-.101	.056
Q46_BACK	-.008	.156	-.060	.034	.048	.056	.946	.045	-.011	-.113	.017	-.107	.034	-.037	.000
Q1_INTEND	-.027	.043	-.044	.049	.042	-.001	.589	-.007	-.040	-.127	.053	.117	.060	.037	-.115
Q45_BACK	.087	.082	-.049	.083	.041	-.152	.270	.123	.111	-.036	-.100	.029	-.163	.034	-.062
Q23_CONTROL_ROLE	.062	-.063	.124	.045	.113	.289	.074	.696	-.016	.002	.061	.024	-.078	.011	-.093
Q47_BACK	.042	.103	-.048	-.051	.153	.122	.024	.551	.024	.064	.014	.063	.040	.091	-.040
Q48_BACK	-.158	-.143	-.105	.084	.206	.078	-.038	.348	-.069	.172	-.214	-.117	.274	.152	-.082

Q44_BACK	.104	.181	-.183	.191	-.097	-.054	-.020	.323	.127	-.232	.042	.059	-.111	.202	.160
Q24_CONTROL_ROLE	.025	.055	-.195	-.013	.111	.123	.046	-.043	.590	.087	-.026	.112	.007	-.096	.111
Q13_ACHIEVE	.047	.058	-.209	.033	.054	.006	-.068	.014	.588	-.037	.073	.059	-.009	.061	-.055
Q12_ACHIEVE	.057	.141	-.058	-.052	.021	.001	.035	.188	.449	-.044	.015	.437	.038	-.118	.135
Q5_FEAS	-.022	.090	-.017	-.073	-.046	.034	-.134	-.033	.054	.578	.119	.083	.095	-.132	-.027
Q9_DESIRE	-.044	-.085	.103	.054	.020	-.083	-.020	.013	-.048	.568	-.005	.100	-.030	-.026	.116
Q3_FEAS	.092	-.118	-.100	-.014	-.034	-.200	-.134	.138	.012	.480	-.085	-.040	-.116	.183	-.069
Q6_FEAS	.117	.358	-.005	-.023	.034	.120	.211	-.015	-.031	-.377	-.067	.181	.186	.000	-.225
Q29_CONTROL_ROLE	-.096	-.106	.250	-.417	-.052	-.066	-.037	-.024	.036	-.095	-.660	-.151	-.031	.096	.088
Q28_CONTROL_ROLE	.087	-.068	.168	.357	.181	.125	.009	.060	.186	.058	.602	.195	-.055	-.019	-.003
Q19_CONTROL_ROLE	.147	-.060	-.054	.064	.138	.021	-.027	-.050	.134	.199	.124	.509	-.042	.104	-.077
Q11_ACHIEVE	.117	.053	.026	.169	.063	-.064	.078	.098	.109	.005	.114	.371	.143	-.059	.006
Q4_FEAS	.167	.397	-.118	.036	-.063	-.066	.070	-.007	.092	-.077	-.047	.080	.458	-.054	-.024
Q43_BACK	-.075	-.002	-.208	-.129	.159	-.109	.046	.293	-.069	-.109	-.091	.014	.008	.602	-.063
Q35_CONTROL_ROLE	-.079	-.136	.252	.027	.007	-.086	-.140	.014	.052	.048	.076	-.073	.025	-.120	.497
Q34_CONTROL_ROLE	-.033	-.009	.188	.076	-.033	.092	-.080	-.243	.048	.060	-.185	.066	-.072	.063	.461

Extraction Method: Principal Axis Factoring.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 31 iterations.

6.7 Appendix G: T tests on factors

Factor 1: Family Influence

t-Test: Two-Sample Assuming Equal Variances: Gender		
	Male	*Female*
Mean	2.432098765	2.633993743
Variance	0.805599647	1.232251295
Observations	81	137
Pooled Variance	1.074232166	
Hypothesized Mean Difference	0	
Df	216	
t Stat	-1.389795773	
P(T<=t) one-tail	0.08301081	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.166021619	
t Critical two-tail	1.971007472	

t-Test: Two-Sample Assuming Equal Variances: Place of Practice		
	TIPP	*TOPP*
Mean	2.551587302	2.597402597
Variance	1.353438089	1.138334879
Observations	72	33
Pooled Variance	1.286609907	
Hypothesized Mean Difference	0	
Df	103	
t Stat	-0.192139041	
P(T<=t) one-tail	0.424005798	
t Critical one-tail	1.659782273	
P(T<=t) two-tail	0.848011596	
t Critical two-tail	1.983264145	

t-Test: Two-Sample Assuming Equal Variances: Level of training		
	4th year student	*Trainees in Practice*
Mean	2.552465234	2.565986395
Variance	0.906524936	1.274695373
Observations	113	105
Pooled Variance	1.083792183	
Hypothesized Mean Difference	0	
Df	216	
t Stat	-0.095817887	
P(T<=t) one-tail	0.461877024	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.923754048	
t Critical two-tail	1.971007472	

Factor 2: Perceived desirability and feasibility

t-Test: Two-Sample Assuming Equal Variances: Gender		
	Male	*Female*
Mean	1.910493827	2.25
Variance	0.859857253	1.402573529
Observations	81	137
Pooled Variance	1.201567501	
Hypothesized Mean Difference	0	
Df	216	
t Stat	-2.2097754	
P(T<=t) one-tail	0.014085391	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.028170782	
t Critical two-tail	1.971007472	

t-Test: Two-Sample Assuming Equal Variances: Place of Practice		
	TIPP	*TOPP*
Mean	1.940972222	2.234848485
Variance	1.342417351	1.027107008
Observations	72	33
Pooled Variance	1.244456856	
Hypothesized Mean Difference	0	
Df	103	
t Stat	-1.253150277	
P(T<=t) one-tail	0.106494173	
t Critical one-tail	1.659782273	
P(T<=t) two-tail	0.212988347	
t Critical two-tail	1.983264145	

t-Test: Two-Sample Assuming Equal Variances: Level of training		
	4th year students	*Trainees in Practice*
Mean	2.207964602	2.033333333
Variance	1.192971713	1.251282051
Observations	113	105
Pooled Variance	1.221047061	
Hypothesized Mean Difference	0	
Df	216	
t Stat	1.165900347	
P(T<=t) one-tail	0.122470252	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.244940504	
t Critical two-tail	1.971007472	

Factor 3: Locus of Control

t-Test: Two-Sample Assuming Equal Variances: Gender		
	Male	*Female*
Mean	5.596707819	5.625304136
Variance	1.671433471	1.42719813
Observations	81	137
Pooled Variance	1.517655663	
Hypothesized Mean Difference	0	
Df	216	
t Stat	-0.165614375	
P(T<=t) one-tail	0.434307669	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.868615338	
t Critical two-tail	1.971007472	

t-Test: Two-Sample Assuming Equal Variances: Place of Practice		
	TIPP	*TOPP*
Mean	5.282407407	5.707070707
Variance	1.851830117	1.741372054
Observations	72	33
Pooled Variance	1.817513049	
Hypothesized Mean Difference	0	
df	103	
t Stat	-1.498423342	
P(T<=t) one-tail	0.068540951	
t Critical one-tail	1.659782273	
P(T<=t) two-tail	0.137081902	
t Critical two-tail	1.983264145	

t-Test: Two-Sample Assuming Equal Variances: Level of study		
	4th year student	*Trainees in Practice*
Mean	5.799410029	5.415873016
Variance	1.147896474	1.839275539
Observations	113	105
Pooled Variance	1.480782691	
Hypothesized Mean Difference	0	
Df	216	
t Stat	2.325237092	
P(T<=t) one-tail	0.010493654	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.020987308	
t Critical two-tail	1.971007472	

Factor 4: Career Mentors

t-Test: Two-Sample Assuming Equal Variances: Gender		
	Male	*Female*
Mean	3.851851852	3.755474453
Variance	0.315277778	0.419547016
Observations	81	137
Pooled Variance	0.38092878	
Hypothesized Mean Difference	0	
Df	216	
t Stat	1.114109446	
P(T<=t) one-tail	0.133235199	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.266470398	
t Critical two-tail	1.971007472	

t-Test: Two-Sample Assuming Equal Variances: Place of Practice		
	TIPP	*TOPP*
Mean	3.736111111	3.757575758
Variance	0.520931142	0.439393939
Observations	72	33
Pooled Variance	0.495599196	
Hypothesized Mean Difference	0	
df	103	
t Stat	-0.14503974	
P(T<=t) one-tail	0.442481468	
t Critical one-tail	1.659782273	
P(T<=t) two-tail	0.884962936	
t Critical two-tail	1.983264145	

t-Test: Two-Sample Assuming Equal Variances: Level of training		
	4th year students	*Trainees in Practice*
Mean	3.836283186	3.742857143
Variance	0.278761062	0.490934066
Observations	113	105
Pooled Variance	0.380918434	
Hypothesized Mean Difference	0	
df	216	
t Stat	1.116754173	
P(T<=t) one-tail	0.132670074	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.265340149	
t Critical two-tail	1.971007472	

Factor 5: Role Models

t-Test: Two-Sample Assuming Equal Variances: Gender		
	Male	*Female*
Mean	3.950617284	3.844282238
Variance	4.280864198	3.338318783
Observations	81	137
Pooled Variance	3.687409677	
Hypothesized Mean Difference	0	
Df	216	
t Stat	0.395084755	
P(T<=t) one-tail	0.346585108	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.693170216	
t Critical two-tail	1.971007472	

t-Test: Two-Sample Assuming Equal Variances : Place of Practice		
	TIPP	*TOPP*
Mean	3.416666667	2.454545455
Variance	2.409233177	1.700126263
Observations	72	33
Pooled Variance	2.188928116	
Hypothesized Mean Difference	0	
Df	103	
t Stat	3.093446493	
P(T<=t) one-tail	0.001273414	
t Critical one-tail	1.659782273	
P(T<=t) two-tail	0.002546829	
t Critical two-tail	1.983264145	

t-Test: Two-Sample Assuming Equal Variances: Level of study		
	4th students	*Trainees in Practice*
Mean	3.796460177	3.114285714
Variance	3.449273072	2.369291819
Observations	113	105
Pooled Variance	2.929282099	
Hypothesized Mean Difference	0	
Df	216	
t Stat	2.940495257	
P(T<=t) one-tail	0.001816809	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.003633618	
t Critical two-tail	1.971007472	

Factor 6: Community Support

t-Test: Two-Sample Assuming Equal Variances: Gender		
	Male	*Female*
Mean	4.200617284	4.145985401
Variance	1.627218364	1.249671264
Observations	81	137
Pooled Variance	1.389503524	
Hypothesized Mean Difference	0	
df	216	
t Stat	0.330667023	
P(T<=t) one-tail	0.37060827	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.74121654	
t Critical two-tail	1.971007472	

t-Test: Two-Sample Assuming Equal Variances: Place of practice		
	TIPP	*TOPP*
Mean	4.128472222	4.393939394
Variance	1.658438478	1.586055871
Observations	72	33
Pooled Variance	1.635950678	
Hypothesized Mean Difference	0	
df	103	
t Stat	-0.987311711	
P(T<=t) one-tail	0.162901749	
t Critical one-tail	1.659782273	
P(T<=t) two-tail	0.325803498	
t Critical two-tail	1.983264145	

t-Test: Two-Sample Assuming Equal Variances: Level of study		
	4th year students	*Trainees in Practice*
Mean	4.123893805	4.211904762
Variance	1.158620417	1.635554029
Observations	113	105
Pooled Variance	1.388255119	
Hypothesized Mean Difference	0	
df	216	
t Stat	-0.551071212	
P(T<=t) one-tail	0.291077206	
t Critical one-tail	1.651938651	
P(T<=t) two-tail	0.582154412	
t Critical two-tail	1.971007472	

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